# CONSTRUCTION NEWS

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## RAILWAYS.

(** Denotes that this work is advertised in Engineering News.*)

BALTIMORE & OHIO R. R. CO.—Baltimore & Ohio Southwestern R. R. Plans are almost ready for the $2,000,000 for terminal improvements in the vicinity of Cincinnati. Larger yards will also be built at Chillicothe, Ohio; Washington, Ind., and Floro, Ill. The improvements in the yards at Seymour, Ind., have been completed, and Cincinnati will be the next basis of activity. The plans of the road include 75 miles of track, with 366 switches in an area of 168 acres, with a capacity of 7,266 cars. A new roundhouse will also be built, with a turntable and a coaling plant. Repair tracks will also be built, with a capacity of 160 cars. Double and passing tracks are also a part of the plan. The plans were prepared at Baltimore under the direction of President Willard, and have been approved by the Board of Directors of the road. Work will be started in the near future. The work will also include several important grade crossing eliminations. A. W. Thompson, Baltimore, Md., is Ch. Engr.

BOSTON & MAINE R. R.—Engineers are running a line of levels from South Vernon to Brattleboro, on the west side of the river. They surveyed for a possible line of track by way of Hinsdale several months ago, with a view to crossing the river at Greenfield and building a station near the Bradley place, thus obviating the necessity of using the 10 miles of Central Vermont road between Greenfield and South Vernon, and since then they have been surveying between Windsor and White River junction, where the Boston & Maine company also uses the Central Vermont tracks. J. P. Snow, Boston, Mass., is Ch. Engr.

CANADA PACIFIC.—The work on the new terminal facilities at Place Viger, Montreal, Can., is now taking definite shape and is well advanced, over a square mile of buildings having been torn down to make way for the improvements which the company are inaugurating. The last trains left the old tracks of the Place Viger station at 1.30 p. m., Oct. 30., and all the evening trains came in on the new tracks, which are now twelve in number, but which will reach 20 before the work is finished and the new station completed. The work is now so well advanced that the nature of the terminal facilities can be gauged. The work on the Notre Dame St. viaduct is proceeding rapidly and all the concrete foundations are in place. The new station building itself is beginning to take shape and much of the necessary steel work is already up. J. G. Sullivan, Montreal, Can., is Asst. Ch. Engr.

CANADIAN NORTHERN RY.—The construction of 150 miles of railway by Hub Company on Vancouver Island will be commenced within the next few weeks, an agreement having been reached between William Mackenzie, Pres., of the company, and Premier McBridfe, on behalf of the Provincial Government. The road will connect Victoria with Port Alberni, on the West Coast. T. Turnbull, Winnipeg, Man., is Asst. Ch. Engr.

CHESAPEAKE & OHIO. R. R. CO.—A proposition has been submitted to the County Commissioners to abolish all grade crossings on the Cincinnati, Chicago & Louisville Ry., which was recently acquired by it. Attorney John Galvin, for the C. & O., appeared before the board and presented plans for the abolition of the grade crossings at the Bridgetown road and the Crookshank road, near Summit. It is at this point the railroad has acquired a tract of land for the purpose of building railroad yards. It proposes to proceed under the law which provides for the abolition of all county grade crossings, the county to pay not more than 35% of the cost, and the railroad 65%; the railroad and the county to agree on what portion of the cost the county shall pay. In this instance, however, the railroad officials state in their communication to the board that they propose to obviate the difficulty about agreeing by assuming the whole cost themselves. F. I. Cabell, Richmond, Va., is Ch. Engr. of the Chesapeake & Ohio. R. R. Co.

CHICAGO-BURLINGTON & QUINCY R. R. CO.—Press advices are to the effect that all the right of way has been secured for a new spur from Hudson to Greely, Colo. The distance is about 40 miles. The Burlington will connect at Greeley with the Colorado Southern, another "Hill" road. It is understood that construction will not be started until spring. W. L. Breckenridge, Chicago, Ill., is Engr. M. of W.

CHICAGO, ILL.—Calumet District.—The roads passing through this district are preparing to spend more than $1,000,000 in improvements in that locality. The Michigan Central is four-tracking its line from Calumet Park, Ill., to Gibson, Ind. Upon the completion of the electric interlocking plant at Hammond, Ind., transfer yards for less than carload lots are to be added to the yards now in operation at Gibson, Ind., by the New York Central Lines. The New York, Chicago & St. Louis is building double-track culverts from Chicago to Fort Wayne, Ind., preparatory to double-tracking its line between those points. The Chicago, Indiana & Southern is double-tracking between Indiana Harbor and Danville, Ill., 45 miles being already completed. The Baltimore & Ohio is preparing to extend its suburban line to Gary, Ind., and the Chicago, Indianapolis & Louisville is contemplating a $50,000 depot in Hammond.

CHICAGO, MEMPHIS & GULF R. R.—The contract to build the last 10 miles of the line from Tiptonville, Tenn., to Hickman, Ky., has been awarded, according to press reports, to C. D. BOUDURAUT, Hickman, Ky., and W. L. MOZLEY, Memphis, Tenn. S. G. Latta, Dyersburg, Tenn., is Pres.

DULUTH & NORTHERN MINNESOTA RY.—This line which has its northern terminus in Lake county may be built to Grand Marias in Cook county some time in the future but there are no definite plans announced as yet. The road is owned by Olger, Smith & Co., of Detroit. B. W. Arnold, Albany, N. Y. is Pres.

GEORGIA (HARKENSVILLE).—The Harkensville & Western R. R. has received its charter to build a proposed line of 20 miles from Harkensvills to Perry, Ga. The directors are T. B. Ragan, Pres.; J. J. Whitfield, Vice-Pres.; N. E. Coates, Secy.-Treas.; E. J. Henro and W. M. Parsons, all of Harkensville; C. C. Duncan and J. P. Cooper, of Perry, Ga.

IOWA (Marshalltown).—The city authorities are taking steps to have the Chicago & Northwestern and the Iowa Central elevate their tracks over third street.

MONONGAHELA R. R.—This road, controlled jointly by the Pennsylvania and the Pittsburg & Lake Erie, has, it is stated, secured the right of way for an extension between Rice's Landing, Pa., and Riversville, Marion County, W. Va. The distance is about 40 miles, and the country rough. J. M. Schoonmaker, Pittsburg, is Pres., and D. K. Orr, Brownsville, Pa., is Engr.

NORFOLK & WESTERN RY.—Press advices are to the effect that extensions are contemplated on the Tug Fork and Dry Fork lines which will aggregate 18 miles. C. S. Churchill, Norfolk, Va., is Ch. Engr.

ROSCOE, SNYDER & PACIFIC RY.—This company contemplates the extension of the lines into northwest Texas to tap some coal deposits recently opened. F. W. James, Abiliene, Tex., is Pres.

UNION SPRINGS & NORTHERN RY.—An extension from Fort Dover to Milstead, Ala., is contemplated. The distance is about 20 miles. At Milstead a connection will be made with the Tallassee & Montgomery. W. M. Blount, Union Springs, Ala., is Pres.

## ELECTRICAL RAILWAYS.

ATHENS, ME.—The citizens of this place have voted to raise $15,000 to aid in the construction of a railway between Skothegan and Athens, Me. The distance is 14 miles. John A. Jones, 164 Wood St., Lewistown, Me., is Engr.

BURLINGTON, VT.—Plans are under consideration by the Burlington Traction Co. for the extension of its tracks through South Burlington, Shelbourne, St. George and Hinesburgh. R. Whalen is Ch. Engr.

SPRINGFIELD, MASS.—A franchise has been granted by the Board of Aldermen to the Springfield St. Ry. to extend its tracks into the Armory Grounds in Sprinfield via St. James St. and Magazine St. R. G. Tayler is Ch. Engr.

SYRACUSE, N. Y.—The Syracuse Rapid Transit Co. will make application to the Common Council to extend some of its tracks in Syracuse. W. J. Harris is Ch. Engr.

CHATHAM, N. J.—A franchise has been granted by the Common Council to the Norris County Traction Co. to build its tracks through Main St. J. L. Desch is Ch. Engr.

ERIE, PA.—The Northwestern Traction Co. has made application to the Common Council for a franchise to build its lines over certain streets. James Burke is Pres.

SUNBURY, PA.—It is stated that the Sunbury, Lewiston & Milton R. R. will soon construct four extensions of its tracks. W. H. Lyons is Pres.

BALTIMORE, MD.—An ordinance has been approved by Mayor Mahool authorizing the United Rys. & Electric Co. to lay double tracks on Light St. William A. House is Pres.

ASHEVILLE, N. C.—The Asheville Electric Co. will construct a 2-mile extension to its tracks soon. H. W. Plummer is Secy. and Gen. Mgr.

FAIRBURN, GA.—The Fairburn & Atlanta Electric Ry. Co. will construct a railway from Fairburn to College Park. L. W. Roberts is Ch. Engr.

BIRMINGHAM, ALA.—A new company has been formed to construct, with the Birmingham Ry, Light & Power Co., A. H. Ford, Pres., an electric railway to Grandview.

BOGALUSA, LA.—The Bogalusa Public Service Corporation has been incorporated with a capital of $500,000 to construct electric railway in and around Bogalusa. The incorporators are C. W. Goodyear, Jr. W. H. Sullivan, N. G. Pearson, J. K. Breeden, C. J. Wade, C. K. Mullings.

NORWOOD, OHIO.—A franchise has been granted and necessary rights of way secured by the Cincinnati Traction Co,, to extend its tracks along Sherman Ave. Theodore Elliott is Ch. Engr.

BLUFFTON, IND.—The Bluffton, Geneva & Celina Traction Co., contemplates the extension of its line to run from Geneva, Ind., to Celina, a distance of 22 miles. Fred Davenport, Bluffton, Ind., is Engr.

SAVANNA, ILL.—The construction of an electric railway is contemplated to connect Sterling, Coleta, Milleidgeville and Lanark, and from Lanark east and west to Freeport and Savanna. W. Osborne, Chicago, is interested.

MANKATO, MINN.—The St. Paul-Mankato Electric Ry. is securing right-of-way for the construction of its proposed electric railway to connect Mankato, St. Paul, and Minneapolis, J. J. Davy is Engr.

KANSAS CITY, KAN.—Surveys are being made by William Barclay, Kansas City, Kan., for the proposed street railway to connect Argentine and Rosedale, Kan.

AMARILLO, TEX.—Work is said to have commenced on an electric railway from Amarillo to San Jacinto Heights a distance of two miles. N. A. Brown is to be interested.

ROCKPORT, TEX.—The Union Terminal Ry. Co., has made application for a charter to build a 25 mile electric or steam railway to connect Rockport, Aransas Pass, Navy City and Port San Antonio. W. D. Newberry is Secy.

PONCA CITY, OKLA.—Arrangements are being made to construct a street railway. B. Stewart and Frank Hatten, Ponca City, are interested.

FRESNO, CAL.—Surveys are being made by S. N. Griffith, Fresno, Cal., who is said to have secured financial backing for the building of a 50-mile railway to connect Fresno and Clovis.

LOS ANGELES, CAL.—The Los Angeles-Western Ry. has incorporated to construct an electric railway to connect Hermosa Beach and Culler. The incorporators are A. W. Taylor, W. C. Wallace, L. Metzger and M. Conway.

TORONTO, ONT.—See item under Bridges.

MEDICINE HAT, ALTA.—The Alberta Electric Ry. Co. is seeking incorporation to construct 500 miles of electric lines in Southern Alberta.

## LIGHT AND POWER PLANTS.

(** Denotes that this work is advertised in Engineering News.*)

CONCORD, N. H.—Plans are being considered by the Central New Hampshire Power Co., recently incorporated with a capital stock of $2,000,000, for the construction of a power plant, to be located on the Blackwater River, at Sweatt's Mills, in Webster. The main dam will be located at Sweatt's Mills and the second dam in Salisbury, above Shaw's Mill. The directors of the company are: Frederick L. Houghton, Dennison Cowles, of Brattleboro, Vt., and Nathaniel E. Martin, of Concord, N. H.

BOSTON, MASS.—We are officially advised that contract for installing electric wires and fixtures for male portion of the Suffolk County jail has been awarded to T. T. KELLY & CO., 2 Columbia St., Boston.

WOONSOCKET, R. I.—The Woonsocket Gas Co. will erect a gas holders with a capacity of 500,000 cu. ft. Z. M. Jenks is Supt.

NEW YORK, N. Y.—Bids will be received by the Fire Commissioner until 10.40, Nov. 17, for furnishing and delivering underground cable for the fire alarm telegraph; and for furnishing and delivering cable and wire for the fire alarm telegraph.

MONTICELLO, N. Y.—The Monticello Electric Light & Development Co. proposes to construct an electric light plant to cost about $20,000. Blake A. Mapledoram is Ch. Engr. and Gen. Mgr.

BURLINGTON, N. J.—The City Council on Nov. 1 granted a 50-year franchise to the Burlington Electric Light & Power Co. A large plant will be erected here.

WESTFIELD, N. J.—The Town Council has awarded contract to the PUBLIC SERVICE CORPORATION OF NEW JERSEY for lighting the streets of the town for three years. Dudley Farrand, Newark, N. J., is Gen. Mgr. Elec. Dept. The company is to furnish tungsten lamps at $18 each per year.

READING, PA.—Berks County and part of Montgomery County and possibly part of Lebanon County will be served soon by a system of electric lighting, permission to furnish which was on Oct. 27 asked of the Governor by the filing of applications for 18 new electric companies. Homer J. Shoemaker, Atty., of Harrisburg, has the matter in charge. The new companies which it is desired to charter follow: Edison Electric Light Co., of Boyertown; Oley Township, Lower Alsace Township, Exeter Township, Earl Township, Douglass Township, Colebrookdale Township, Amity Township, Berne Township, Edison Birdsboro, Edison Pottstown, Lower pootsgrove, Muhlenbert Township, Ontelaunee, Robeson, Union Township, Upper Pottsgrove, West Pottsgrove Township. Incorporators in the entire 18 companies are: Walter A. Rigg, George L. Roller, Harry H. Reigel, all of Reading, and the amount of capital in each company is $5,000.

HOLLIDAYSBURG, PA.—For the purpose of ascertaining what part of Blair County is suited for the location of its proposed power plant, the officials of the Penn Central Light & Power Co. made a tour of the county, recently. R. W. Muirs is Pres.

BRADFORD, PA.—The B. U. TAYLOR CO., Olean, N. Y., has been awarded the contract for the masonry and steel work and the installation of a steam power plant for mills to be erected at the new town in Norwich Township by the Goodyear Rubber Co. Cost, $30,000.

DOVER, DEL.—A charter has been granted to the American Light, Heat & Power Co., with a capital of $15,000,000, to generate and furnish light and heat. The Delaware representative is the Corporation Trust Co. of America, 814 Equitable Bldg., Wilmington, Del.

*WASHINGTON, D. C.—Bids will be received by the Department of the Interior until 2 p. m., Nov. 17, for the installation of steam engines, electric generators and switchboard for the central power plant at the Freedmen's Hospital and Howard University, Washington. Jesse E. Wilson is Asst. Secy.

RICHMOND, VA.—The Richmond Power Co. has petitioned for a franchise to operate a system of poles, wires and conduits for the purpose of supplying electric lighting and power current. The company proposes to erect its plant at the mouth of the Midlothian Coal Mines., in Chesterfield County, and to bring power here for manufacturing and lighting purposes.

OCCOQUAN, VA.—Bids will be received until Nov. 12 by the Commissioners of the District of Columbia, Washington, D. C., for furnishing and installing a complete electric lighting plant for the temporary buildings of the workhouse at Occoquan.

BLUEFIELD, W. VA.—The Clinchfield Coal Corporation has awarded to the WESTINGHOUSE ELECTRIC CO., Pittsburg, Pa., a contract for the erection of a complete electric generator and transmission system for its entire holdings in Wise and Buckhannon Counties, Va. The contract includes a central power plant containing, initially, two turbine units of 1,250 KW., each generating power of 6,600 volts; 3-phase, 60-cycle, and transmitting at this voltage to all sub-stations within a radius of six miles. At this distance power will be converted, without the aid of transformers, to 250 volts direct current through synchronous motor generator sets. For points outside of this radius, and up to 20 miles, the power will be stepped up to 22,000 volts potential and converted through transformers and motor generator sets to 250 volts direct current at the proposed sub-stations. J. M. Roan is Gen. Mgr. The Clinchfield corporation has appropriated $50,000 for carrying the water of the Clinch River a distance of eight miles for use at the mines.

CHAPMANVILLE, W. VA.—The Castlebrooke Carbon Black Co., Williamsport, Pa., has secured an 18-month option on oil and gas properties in Logan County, producing daily 20,000,000 ft. of gas, and will erect, within the next four months, a $60,000 plant for the manufacture of carbon black and kindred mineral carbon substances.

ELBA, ALA.—The Pea River Power Co. is contemplating the construction of a dam across the Pea River, for which investigations are being made by Professor Kay, of the University of Alabama. If the construction of a dam is not considered feasible a boiler and engine will be purchased immediately for the local plant. James Grimes, Elba, is Ch. Elecn.

CLEVELAND, OHIO.—Plans and an application for a permit to build an $850,000 power-house on the lake front at East 70th St. have been filed with the Building Inspector by the Cleveland Electric Illuminating Co. When equipped, it is estimated the building, complete, will cost $2,000,000 to $3,000,000. The plans, which were drawn by P. L. Cobb, Arch., show that the plant will cover 71,604 sq. ft., or nearly two acres. The office will be at 720 East 70th St. The plant will house four turbines and 54 boilers. Robert Lindsay, Cleveland, is Gen. Supt.

WARRENSVILLE, OHIO.—Bids will be received at the office of the Secretary of the Director of Public Safety,, Cleveland, Ohio, until noon, Nov. 18, for furnishing and installing a steam and electric generating unit, switchboard and appliances for the Service Quadrangle, Colony Farm, Warrensville, Ohio. F. G. Hogen is Dir. Pub. Safety.

CLEVELAND, OHIO.—See item under Water Supply-Lrrigation.

ELKHART, IND.—Plans are being considered by the Elkhart Industrial Association for installing an ornamental street lighting system on Main St., from Jackson St. to the Lake Shore. The association proposes to install the posts and lamps, the city to maintain the lamps. A. M. Smith is City Engr.

MICHIGAN CITY, IND.—The Chicago, Lake Shore & South Bend Ry. Co. is building a new sub-station at Charleston and a new transmission line from its power plant in Michigan City to Hammond, Ind. The company has awarded contract to the GENERAL ELECTRIC CO., Schenectady, N. Y., for two 1,000-KW. motor generator sets and frequency changers, with necessary transformers, and is preparing to supply electricity for motors on a large scale. C. N. Wilcoxon is Gen. Mgr.

MARION, IND. — Bonds for $75,000 have been sold, to be used for the construction of an electric light plant. Edgar L. Vincent is Engr.; Frank R. Heck is City Clk.

SAGINAW, MICH.—The F. W. CARLISLE CO., Saginaw, has secured the contract for the construction of the leather factory for Spence Bros., in this city. The plant will be equipped with new machinery, including electric motor drive.

OLIVET, MICH.—A company has been organized in Olivet for the purpose of furnishing electricity in the village and to the college, for which a franchise has been granted by the Village Council, subject to approval of the voters at an election to be held within 60 days. If granted a franchise, the company agrees to have the plant in operation within 90 days. E. M. Arnos, Treas. of the college, is interested.

CLINTON, ILL. — Extensions are being made to the plant of the Clinton Gas & Electric Co., including an addition to the power-house, which will be equipped with two 400-HP. Murray-Corliss engines, direct connected to two 200-KW., 3-phase, 60-cycle, 1,100-volt generators and new switchboard. A new stack is being erected.

BENTON, ILL. — Arrangements are being made by the Hamilton Utility Co. for the erection of an electric plant on the property recently acquired in the Martin & Copple addition. The equipment of the plant will include a 350-HP. Corliss engine, and the output will be double that of the old plant. The machinery in the old power-house will be removed to the new power station, and will be used for day service and emergencies. The company also proposes to install a water-works system; the pumping station will be located on a 77-acre tract, where a dam will be built and a settling basin made.

ALLERTOWN, IOWA.—The contract for the construction of a new power-house for the municipal electric light plant has been awarded to A. MARDIS, Corydon. The old plant was destroyed by fire on Oct. 6.

ELLIOTT, IOWA. — R. O. Prather, Griswold, Iowa, has applied for a franchise to construct and operate an electric light plant here.

PINE RIVER, MINN.—The Village Council has granted a franchise to H. A. and T. L. Arvig to construct and operate an electric light plant in Pine River. A reinforced concrete dam, capable of developing 300 HP., is being constructed by WEBBER & HILL.

BRAINERD, MINN. — The contract has been awarded to the TOLTZ ENGINEERING CO., St. Paul, Minn., to supply electricity for a term of ten years in Brainerd. It is stated that machinery will be ordered soon for the proposed plant, and it is expected to have the plant in operation by Dec. 1.

FRANKLIN, NEB.—The city proposes to construct an electric light plant to cost about $8,000. J. A. Dickey is City Clk.

GRAND FORKS, N. DAK.—Approximately $100,000 will be spent here before Jan. 1 by the Red River Power Co., owned by H. M. Byllesby & Co., 318 La Salle St., Chicago, for improvements. The work includes the construction of additions to the gas and electric plants, the doubling of their capacity, and the installation of a gas and electric service for every portion of the city. About 20 miles of pole lines for carrying electricity to the residence districts have been put in, and four miles of new gas mains have been laid.

CHAMBERLAIN, S. DAK.—The executive committee of the Dakota Portland Cement Co., with their engineers, have been engaged in the consideration of bids and proposals for the purchase of machinery to be installed in the company's plant now being built at Chamberlain. Contracts have been awarded as follows: ALLIS-CHALMERS CO., Milwaukee, Wis., large turbines for power plant; GENERAL ELECTRIC CO., Schenectady, N. Y., 33 electric motors for driving heavy machinery; BRADLEY PULVERIZING CO., 92 State St., Boston, Mass., nine finish grinders; POWER & MINLING MACHINERY CO., Cudahy, Wis., tube mills, dryers, coolers and rotary kilns. These rotary kilns are eight ft. in diameter by 125 ft. in length, and weigh 115 tons each. The plans and specifications for both mill and machinery were made by the Freeborn Engineering & Construction Co., Kansas City, Mo., who have charge of the engineering and construction work.

CHINOOK, MONT.—A committee, composed of A. S. Lohman, Thomas O'Hanlon and W. H. Duke, has been appointed to consider the question of installing an electric light plant here.

LIBBY, MONT. — A franchise has been granted by the City Council to E. K. Barnum and P. D. Pratt, Libby, to construct and operate an electric light plant, waterworks and telephones. It is proposed to install water and electric plants and a telephone system. Estimated cost, about $100,000.

KING CITY, MO.—We are officially advised that the King City Electric Light & Power Co. plans to construct an addition to its power plant here. The necessary equipment will include a producer-gas engine, about 60 HP., alternating-current generator of 35 or 50 KW., 2,300 volts, 60-cycle, 3-phase; and aeriel lines. F. A. Thompson, King City, is Pres. and official in charge. Estimated cost, $7,000.

KANSAS CITY, MO.—The Board of Public Works has approved the plans of the Kansas City Electric Light Co. for the installation of underground conduits for carrying its wires in the restricted district about the power-house at 15th and Walnut Sts. Work will commence on the Southwest Boulevard. W. W. Wheatley is Gen. Mgr.

HUBBARD CITY, TEX.—The Union Central Light & Ice Co. has awarded to the SKINNER ENGINE CO., Erie, Pa., and to ALLIS-CHALMERS CO., of Milwaukee, Wis., contract for automatic engine generating sets, and to the PHOENIX IRON WORKS CO., Meadville, Pa., for boilers.

ENGLE, N. MEX.—Engineers in charge of the Elephant Butte dam at Engle have been authorized by the Secretary of the Interior to proceed with the work on what is known as "force account." Under the order all contracts will be eliminated, and the work, which is to cost about $1,000,000, will be done directly by the government. About $750,000 is available for the preliminary work.

SPOKANE, WASH.—It is stated that $400,000 will be expended by the city for a municipal water, light and power plant. George W. Armstrong is Pres. Bd. Pub Works.

CENTRALIA, WASH.—A contract is about to be let by the City Council for a complete generating plant, consisting of two 500-KW. steam turbine units, with boilers and other accessories. C. A. Harmony is City Engr.

CLARKSTON, WASH.—The Lewiston-Clarkston Co. has completed plans for the improvement of the lighting and power system here. Estimated cost, $100,000. William Wheeler is Supervising Engr., Boston, Mass.

CENTRALIA, WASH. — The Council has adopted the plans and specifications prepared by the City Electrician for the installation of a complete lighting plant. Estimated cost, between $40,000 and $43,000.

LINNTON, ORE.—It is proposed to construct a municipal light and power plant here.

PORTLAND, ORE.—The Portland Gas & Coke Co. will spend about $500,000 next year in extending the gas mains to the suburban residence sections of Portland. H. H. Pabst is Gen. Mgr.

FOREST GROVE, ORE.—The Independent Electric Co. has been incorporated by H. G. Fleischauer, F. Hall and E. Hardy, and has completed negotiations for the purchase of the Hillsboro Water, Light & Power Co., of Raymond, and the Haines Light & Power Co., of Forest Grove. The new company will improve its plant. It is proposed to extend to Beaverton, Orenco, Cornelius and Dilley.

HERMISTON, ORE.—B. A. Chisolm, Meadows, Idaho, is interested in the construction of a power and light plant to be constructed here.

OROVILLE, CAL.—The Oro Water, Light & Power Co. is making investigations in the Humbug Valley, with a view of developing the water-power of Yellow Creek. It is proposed to erect a plant at the mouth of the creek at the Feather River, about eight miles from Longville. The company has purchased nearly 2,500 acres in the valley for reservoir purposes. J. W. Goodwin is Pres.

RED BLUFF, CAL.—A notice, appropriating 8,000 ins. of water from Hill Creek, has been filed by Leon Bly. The purposes set forth for use of the water are for irrigation and power.

WHITTIER, CAL.—The Board of Trustees of High Schools has awarded contract for a heating plant in the new science hall to the MACHINERY & ELECTRICAL CO., Los Angeles, Cal.

VALLEJO, CAL.—Bids were received as follows on Nov. 5, by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for remodeling gas house for employees' quarters, at the Mare Island navy yard: W. M. Concannon Co., Monadnock Bldg., San Francisco, $6,976; W. E. Burnham, 1333 Eddy St., San Francisco, $5,837; Gutleben Bros., Monadnock Bldg., San Francisco, $6,555; Pringle Dunn & Co., 338 Pine St., San Francisco, $8,648.

FAIRFIELD, CAL.—The VALLEJO ELECTRIC LIGHT & POWER CO. has been awarded the contract for wiring and furnishing the new court-house at Fairfield with all electrical appliances. K. Casper is Engr. Power Station, San Francisco.

OAKLAND, CAL.—The Southern Pacific Ry. Co. has filed application for a permit to construct a substation at the west side of Bay St., foot of Sixth St., to cost $35,000. The building will be of concrete. WILLIAM BROS. & HENDERSON are the contractors.

OROVILLE, CAL.—H. L. Gradon, C. E., Oroville, has filed a notice of location of 20,000 ins. of water in Middle Fork of the Feather River, to be diverted just below the mouth of Brush Creek and used for power and irrigation.

GRANGEVILLE, IDAHO. — A proposition has been submitted by the Grangeville Electric Light & Power Co. to the City Council offering to increase the street lighting system at a lower rate than charged for the present service, provided a 5-year contract be awarded the company. At the present time the city pays about $97 per month for the lighting service, but under the proposal submitted the company offers to double the service for $140 per month. D. C. Van Buren is Mgr. and Ch. Elecn.

TORONTO, ONT.—Bids will be received by G. R. Geary, Mayor and Chn. Bd. of Control, until noon, Nov. 15, for Tungsten lamps.

LONDON, ONT.—The United Fuel Supply Co., it is reported, will lay an 80-mile pipe line to supply the cities of St. Thomas and London with gas. Address Charles McCauley, Montpelier, Ind.

WINNIPEG, MAN.—The Manitoba Power Co. has been incorporated, with a capital of $5,000,000, to generate and transmit electricity for lamps and motors. H. A. Lovett, of Montreal, Que., is one of the incorporators.

CALGARY, ALTA.—Henry Holgate and William Kennedy, both of Montreal, Que., have been retained by the city to report on power site along the Elbow River, with a view to municipal power development.

NELSON, B. C.—The International Electric Co., Ltd., with headquarters in Nelson, B. C., and Portland, Ore., is planning the establishment of a power plant on the Pend Oreille River, north of the international boundary. W. E. Moore, Engr., Paulson Bldg., Spokane, Wash., has reported that 65,000 HP. may be developed at the upper site at a cost of about $60 per HP. The site proposed is about 100 miles north of Spokane.

## BRIDGES.

(* *Denotes that this work is advertised in Engineering News.*)

BECKET, MASS.—The contract has been awarded by the Boston & Albany R. R. Co. to NEW ENGLAND CONSTRUCTION CO., 274 Main St., Springfield, Mass., for the masonry, excavating and grading of two bridges.

CLINTON, MASS.—The contract has been awarded by the Boston & Maine R. R. Co. to the NEW ENGLAND CONSTRUCTION CO., for masonry, excavating and grading of bridge over Nashua River.

HOLYOKE, MASS.—The construction of two new bridges has been decided upon; one to be constructed over Main St. in South Holyoke and the other over second level canal in Cabot St. F. M. Walsh is Chmn. of the Bd. of Public Wks.

NIAGARA, N. Y.—The construction of a bridge over Cayuga Creek is contemplated by the taxpayers. Wilbert W. Read is City Engr.

YONKERS, N. Y.—The Board of Contract and Supply has ordered that bids be advertised for the construction of a bridge over Nepperhan River.

BUFFALO, N. Y.—Plans have been prepared by the N. Y., Chi. & St. Louis Ry. Co. for the construction of a steel lift bridge over the Buffalo River, to be used jointly with the Pennsylvania R. R. Co. Plans have been submitted to the Bureau of Engineering for approval under the River Improvement Act.

BUFFALO, N. Y.—Plans and specifications have been submitted to the Bureau of Engineering by the Lake Shore & Michigan Southern Ry. for the construction of an 80-ft. steel lift bridge spanning the Buffalo River, has been approved.

CARLISLE, PA.—The construction of a bridge spanning the Branch Creek on Main St. is under consideration.

ELIZABETHTOWN, PA.—The contract has been awarded to D. B. HOOVER for the construction of a reinforced concrete girder bridge.

WESTERNPORT, MD.—Bids will be received by the Commissioners of Westernport until 2 p. m., Nov. 19, for the construction of a bridge over Georges Creek. O. H. Bruce is Clk.

WHEELING, W. VA.—Plans and specifications have been submitted by Engineer Herman Lamb, Pittsburg, for the repair and strengthening of the bridge across Wheeling Creek.

GREENVILLE, S. C.—Two bridges will be constructed over Mush Creek, near Tigerville and one over Brushy Creek on Augusta Rd. J. P. Goodwin is Superv.

MIAMI, FLA.—Dade County Commissioners have decided to construct several bridges.

WEST PALM BEACH, FLA.—The Lake Worth Bridge Co. has incorporated with a capital stock of $30,000 to erect a bridge across Lake Worth, in Palm Beach County. E. N. Dimick, Palm Beach, Fla., is Pres.; George W. Jones, West Pam Beach, Secy. and Treas.

DYERSBURG, TENN. — Birmingham & Northwestern Ry. will construct 1,200-ft. trestle bridge. R. M. Hall is Pres.

HAMILTON, OHIO.—The contract has been awarded to C. F. McDONOUGH, 509 Betts St., Cincinnati, Ohio, for the construction of a concrete bridge over Toad Creek.

LOGAN, OHIO.—The contract has been awarded to B. CHAMBERLAIN, Bellefontaine, Ohio, for the superstructure of concrete, oak plank flooring, steel bridge.

CLEVELAND, OHIO.—Bids have been received by the County Commissioners, Cleveland, Ohio, on Nov. 2, for the construction of bridge works on the Denison-Harvard Viaduct, Newburg Township, and the contract has been awarded to the CONCRETE & STEEL CONSTRUCTION CO., Century Bldg. J. F. Godenbogen is Clk.

LA PORTE, IND.—The contract has been awarded to W. A. STEIGLEY, La Porte, for the abutments of a concrete bridge, and to the ROCHESTER BRIDGE CO., Rochester, Ind., for the construction of the superstructure.

PIKE COUNTY, IND.—The contract for the construction of steel bridges in Marion and Washington townships have been awarded to A. H. KINMAN, Petersburg, Ind.

WARSAW, IND.—The contract for the construction of eight bridges has been awarded to the ELKHART BRIDGE & IRON CO.

WINAMAC, IND.—The contract for the construction of a 45-ft. span steel bridge has been awarded to F. M. WILLIAMS, Winamac, Ind.

MILWAUKEE, WIS.—The construction of a bridge spanning the Milwaukee River at Wright St. is contemplated. Henry Smith, Alderman, is interested.

DAVENPORT, IOWA.—The County Commissioners have awarded the contract for the construction of five steel bridges and bridge piers in various sections of the county to BRALY & WHITLOCK, Portland, at $20,995.

GRUNDY CENTER, IOWA.—Bids will be received by E. G. Ensminger, Audr. of Grundy County, until noon, Nov. 16, for bridge lumber and piling, and constructing steel and concrete bridges.

EAST GRAND FORKS, MINN.—Only one bid was received and same was rejected for reconstructing and repairing approach to the DeMers Ave. Bridge across the Red River of the North, on DeMers Ave. James Gorman, City Clk.

HUTCHINSON, MINN.—Bids will be received by the Board of Supervisors until 10 a. m., Nov. 15, for building a steel and concrete bridge across Bear Creek. E. H. Malchow is Town Clk.

ST. PAUL, MINN.—The construction of a bridge over East Seventh St. is contemplated at an estimated cost of $75,000. L. W. Rundlett is City Engr.

DULUTH, MINN.—The con for the construction of the bridge on S uis Bay has been awarded to J. M. GE CO., Philadelphia, Pa., and the cont or work on the 600-ft. extension has be rded to the BARNETT & RECORD Duluth, Minn.

TONGANOXIE, KAN.—Bids be received by J. W. Niehaus, Clk., Leavenworth County, Leavenworth, Ka il noon, Nov. 12, for repairing bridge N south of Tonganoxie.

SPRINGFIELD, MO.—The fo bids have been received by the City il for the construction of a bridge a Wilson Creek on Boonville St.: Weber $6,848; M. H. Clark, $7,250; K City Bridge Co., and the Weaver-W Construction Co., $6,948.

NEW BLOOMFIELD, MO. llaway County Commissioners will dire gineer W. P. Divers, Fulton, to prepare s and specifications for the constructio concrete and steel bridge. W. R. lor is County Clk.

DALLAS, TEX.—The contract f e furnishing cement to be used in co uction of the Dallas-Oak Cliff viaduct been awarded by Commissioners' Cou to the SOUTHWESTERN STATES PO LAND CEMENT CO., Dallas.

ALBUQUERQUE, N. MEX.—The ontract for the construction of the propos bridge across the Verde River has been aw ded to the MISSOURI VALLEY BRIDGE & IRON CO., Leavenworth, Kan., at $18, The structure will have three 100-ft. sp s.

BELLINGHAM, WASH.—Plans and specifications have been prepared by City Engineer Whitney for the construction of a substntial bridge across Whatcom Creek, at Prcspect and Dupont Sts. Estimate cost is $15,000.

SEATTLE, WASH.—Bids were opened for the construction of the $240,000 viaduct to be erected for the C. & W. Ry. at Jackson St., also at Fourth Ave. All but four of the bids have been rejected and the contract will soon be awarded.

TACOMA, WASH.—The construction of a steel bridge at Eleventh St. and the Puyallup River bridge has been decided upon and bids will be called for in the near future.

PORTLAND, ORE.—Bids will be received at the United States Reclamation Service, Portland, Ore., until 2 p. m., Dec. 15, for the construction of the Lost River bridge located about 10 miles southeast of Klamath Falls, Ore. Jesse E. Wilson is Acting Secy.

OAKLAND, CAL.—Bids for the construction of a bridge over Sausal Creek have been received by the Board of Public Works as follows: F. Nelson, Esterlee Construction Co., H. F. Sorensen, Contra Costa Construction Co., Nowart & Perkins, Michael Heafey, Cotton Bros. & Co. and Scott & Farley. The contract was awarded to the ESTERLEE CONSTRUCTION CO.

CHICO, CAL.—Bids will be received by P. Hudspeth, City Clk., at his office, until 8 p. m., Nov. 12, for the construction of a reinforced-concrete bridge across Little Chico Creek, at the foot of Broadway St., according to plans and specifications on file with the clerk.

STOCKTON, CAL.—The Stockton-Modesto Electric Ry. will construct a $35,000 steel bridge across the Stanislaus River. Joseph F. Peters is interested.

PARK CITY, UTAH.—The erection of bridge spanning Sever Creek has been ordered by the Council.

FREDERICTON, N. B.—Chief Commissioner Morrissy is calling for bids for reconstructing the McBride bridge in Carleton County.

## BUILDINGS.

BOSTON, MASS.—Bids were received on Oct. 31, we are officially advised, for the construction of a Psychopathic Hospital, four stories high, 300 × 150 ft. The general contract was awarded to the NOEL CONSTRUCTION CO., German and Calvert Sts., Baltimore, Md., at $336,270, and the plumbing contract was let to the WELLS & NEWTON CO., 185 Essex St., Boston, at $22,900. There will be three buildings. The cost of them will be $425,000, and the equipment $50,000. Kendall, Taylor & Co., 93 Federal St., Boston, are Archs.

SPRINGFIELD, MASS.—The contract for erecting a 3-story office building on West State St. for the United Electric Light Co. has been awarded to CASPER RANGER, of Holyoke. It will have a frontage of 61 ft. and a depth of 75 ft. Cost, $100,000.

REVERE, MASS.—The following bids were received on Nov. 2 by S. W. Gillette, Secy. of the School Com., for the erection of a school house on Malden St.: Gahey & O'Connor, $73,566; with granite trimmings, $74,466; Whitcomb & Kavanaugh, $75,674, with granite trimmings, $75,674; A. D. Carter, $78,488; with granite trimmings, $79,488; Strout Bros., $81,000; with granite trimmings, $82,200; C. S. Cunningham Sons, $81,490; with granite trimmings, $82,490; M. M. Dyer, $81,513; with granite trimmings; $83,513; F. A. Leonardi Co., $81,974; William A. Crane, $82,664;; A. B. Murdough, $94,767; with granite trimmings, $94,7[illegible]; Louis B Caderia & Son, $98,312; with granite trimmings, $98,690.

For heating same: Huey Bros (tubular boilers) $18,377; (sectional boilers) $16,747; L. B. Murray, $18,250; (sectional boilers) $18,500; J. J. Hurley, $18,4[illegible]; (sectional boilers) $16,927; Lackey & McMurner, $18,700; (sectional boilers) $18,[illegible]; Chase & Baker, $18,800; (sectional boilers) $17,880; C. H. Sanborn, $19,275; (sectional boilers) $17,070; J. P. Dwyer, $19,[illegible]; (sectional boilers) $17,777; Stone-Underhill Co., $19,978; (sectional boilers) $1[illegible],278; W. W. Campbell & Son, $19,907; (sectional boilers) $18,013; Buerkel & Co., $21,312.

NEW BRITAIN, CONN.—Landers, Frary & Clark have awarded the contract for a 1-story storage building, 30 × 100 ft., to the B. H. HIBBARD CO., of that city.

TROY, N. Y.—A public competition for architects will be held by the Board of Commissioners until 5 p. m., Dec. 1, for the erection designs, plans and specifications for a new jail, workhouse and quarters for the Sheriff in Rensselaer County, to be erected at Troy. Roy H. Palmer, Frear Bldg., is Clk. of Comn.

PERRYSBURG, N. Y.—The contract for erecting the J. N. Adams Memorial Hospital for Incipient Tuberculosis has been awarded to C. A. HAGER, of Holland. List of bids was given on Oct. 20.

ROCHESTER, N. Y.—The Blessed Sacrament Church, Rev. Thomas F. Connors, Pastor, 9 Oxford St., is having plans prepared for a church, of stone and brick, to be erected at Monroe and Rutgers St., at an approximate cost of $60,000.

NEW YORK, N. Y.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has awarded the contract for the construction of two sets of quarters at the Marine Hospital, New York, to the THOMAS J. BUCKLEY CONSTRUCTION CO., 103 Park Ave., New York, at $25,470. Bids were received on Oct. 14 and noted on Oct. 20.

NEW YORK, N. Y.—We are officially advised that the LEVIN & LEVIN CONTRACTING CO., 320 Fifth Ave., has been awarded the general contract to erect two tenement houses on East 77th St., near Second Ave., for the Open Stair Tenement Co. Henry A. Smith, 1181 Broadway, is Arch. Approximate cost, $200,000.

We are officially advised that George M. McCabe, Arch., 96 Fifth Ave., is preparing plans for a 7-story brick and stone loft building, 23 × 83.11 ft., at 39 West Eighth St. William F. Donnelly, 99 Nassau St., is the owner. Contracts will be let soon. Cost, $42,000.

Buchman & Fox, 11 East 59th St., Archs., are preparing plans, we are advised, for an 11-story brick and stone store and office building, 93.5 × 175 ft., with a tar and gravel roof, at the southeast corner of Fifth Ave. and 38th St. Mrs. Elizabeth M. Anderson care of Masten & Nichols, 49 Wall St., is the owner. Cost, $650,000.

We are officially advised that the Trinity Church Corporation, 187 Fulton St., has awarded to the WILLIAM YOUNG CO., 550 West 41st St., the general contract to erect a 4-story stone and brick mill-construction loft building at the northwest corner of Clark and Dominick Sts. Renwick, Aspinwall & Lucker, 320 Fifth Ave., are the Archs. Estimated cost, $60,000. Noted on Oct. 6 and 13.

Plans for a flatiron building have been filed by Charles B. Meyers, Arch., 1 Union Sq., for the Gerliet Mayer Construction Co., of which Gerliet Mayer is Pres. The building, a 6-story apartment, is to be erected at the junction of Edgecombe Ave., Bradhurst Ave. and 142d St. It will have a frontage of 20 ft. on the street and 177.8 ft. on the Avenues. The main entrance will be on Bradhurst Ave. The facade will be of brick, and the cost has been estimated at $125,000.

Plans have been filed for erecting a 4-story store building at the southeast corner of Sixth Ave. and 18th St. The proposed building is to be erected for David Price, as lessee. It will have a frontage of 92 ft. on the avenue and 82 ft. on the street, with a facade of limestone and terra cotta. It is estimated to cost $125,000. The owners are John A., Elizabeth W., Lewis S., Margaret L., Robert W., and Alice B. Chanler. Buchman & Fox, 11 East 59th St., are the Archs.

Nathan Rubenstein, builder, 15 West 119th St., is having plans prepared by Charles B. Meyers, Arch., 1 Union Sq., for five 5-story flat buildings, 59 × 47 ft., to be erected at 178th St., Mapes and Prospect Aves., the Bronx, to cost, approximately, $200,000. The owner will handle the building contracts and will soon be ready to receive estimates on all sub-contracts and materials.

George Keister, Arch., 12 West 31st St., has filed plans for a 4-story theater to be built on the east side of Extra Pl., 62.1 ft. north of First St. The building will have a frontage of 64.1 ft. on the place, a depth of 134.3 ft., and a frontage of 86.5 ft. on First St. George F. Johnson is the owner. The cost has been placed at $175,000.

Schaefer & Jaeger, Archs., 401 Tremont Ave., are preparing plans for two 5-story brick tenements, with tin roofs, 40 × 90 ft., for Daniel Houlihan, 2867 Bainbridge Ave. They will be erected at the northeast corner of Bedford Park Boulevard and Bainbridge Ave. Cost, $80,000.

Albert Rothermel, Arch., 411 East 144th St., is preparing plans for two 5-story brick tenements, 34.6 × 123 ft., with slag roofs, on the west side of Tinton Ave., 110.7 ft. north of Westchester Ave., for Ellen Mulhare, 404 East 141st St. Total cost, $80,000.

BLOOMFIELD, N. J.—The lowest bid received for the erection of a high school building here was that submitted by the John A. Carter Co., Heed Bldg., Philadelphia, Pa., at $180,000.

CAMDEN, N. J.—IRWIN & LEIGHTON, Franklin Bldg., Philadelphia, have been awarded the contract to rebuild the bank building of the New Jersey Guarantee & Title Co. at Camden, at $42,000.

JERSEY CITY, N. J.—The Bergen Lodge Realty Co. has filed articles of incorporation with John F. Crosby, Clk. of Hudson County, for the purpose of erecting a lodge building for the Bergen Free and Accepted Masons, to replace the one at Montgomery St., recently destroyed by fire. The company's capital is $50,000. The incorporators are: Wilbur E. Mallalieu, 62 Monticello Ave.; Edward H. Leetch, 25 Belmont Ave.; Henry Spence, 68 Bergen Ave.; Charles V. Tuthill, 494 Bergen Ave.; George C. Warren, Jr., 240 Union St.; Charles L. Simpson, 212 Summit Ave.; and Thomas H. Hall, 61 Duncan Ave.

PHILADELPHIA, PA.—The Union League will shortly begin the erection of another addition to its building. It will occupy the middle section of the lot from the rear of the 15th St. annex, to the rear of the main building, an area of 100 × 113 ft., and will be eight stories in height, of Indiana limestone. Horace Lumbauer, Land Title Bldg., is the Arch. Cost, $500,000.

John Megraw, 5400 Kingsessing St., will erect 52 2-story houses, 16.4x 50 ft. each, on both sides of Wilton St., between Warrington and Springfield Aves., at a cost of $195,000.

Ballinger & Perrot, Archs. and Engrs., 1211 Arch St., have awarded the contract to IRWIN & LEIGHTON, Franklin Bldg., for a loft building for Leo & Arthur A. Niessen, to be erected at the corner of Twelfth and Race Sts. The building will have a frontage on three streets, being 58 ft. on Race St., 100 ft. on Twelfth St., and 58 ft. on Spring St. It will be eight stories and basement in height, with mezzanine floor in the first story. The exterior will be of brick, with ornamental terra cotta trimmings, and the columns, floor and roof construction will be of reinforced concrete. Noted last week.

PHILADELPHIA, PA.—Competitive plans are being prepared by Magaziner & Potter, 137 South Fifth St., Alexander Adams, 1012 Walnut St., and Seymour & Paul Davis, 1600 Chestnut St., Archs., for a 6-story building for the Young Women's Christian Association, on a lot recently purchased by the association at Hancock St. and Allegheny Ave.

PITTSBURG, PA.—The contract to erect a 4-story department store at Carson and South Seventeenth Sts., has been awarded to DAVID T. RIFFLE, Keenan Bldg. Estimated cost, $75,000.

BEECHVIEW (Pittsburg post-office), PA.—A 4-story store, office and auditorium building is to be erected here by P. J. Boylan, of Beechview. It will be built of pressed brick and cement, and will be 100 × 167 ft. and bounded by Fallowfield, Hampshire and Pennsylvania Aves. and Broadway.

GERMANTOWN (Philadelphia post-office), PA.—A permit was obtained recently by James F. Maguire, Fidelity Bldg., Philadelphia., for a 4-story flat house, 70 × 80 ft., to be built at the southwest corner of King and Laurens Sts., Germantown, and another, 48 × 81 ft., to be built on the east side of King St., north of Queen, adjoining the first. The cost will be $60,000.

HAZLETON, PA.—We are officially advised that bids will be received about Jan. 1 for the construction of a residence, 60 × 245 ft. for Alvah Markle. Guy King, 1513 Walnut st., Philadelphia, is the Arch. It will be 2½ stories high, of steel, stone, cement, etc.

WAYNESBORO, PA.—Official advices to the effect that bids will be received about Nov. 30 for the construction of a 3-story and basement high school, of brick and stone, by the School Board have been received by us. It will be 115 x 112 ft. Estimated cost, $60,000. J. W. Waltz, of Waynesboro, is Arch.

OWINGS MILLS, MD.—Plans for the proposed school building to be erected at Owings Mills for the Maryland Training School for the Feeble Minded, were recently completed by Ellicott & Emmart, Archs., Union Trust Bldg. The structure will be four stories high, of brick and stone, and will cost about $150,000. It will be the main building of a group which are now being contemplated. Steam heat and electric lighting will be installed.

The ENGINEERING CONTRACTING CO., St. Paul and Franklin Sts., has been awarded the contract for the erection of 20 dwellings at Windsor Hills by William H. Baker, Jr. The proposed structures will be of brick and ornamental frame, of the semi-detached type. Electric lighting and hot-water heating will be installed. The aggregate cost will be about $45,000.

ARLINGTON, MD.—W. W. MILLER, 7 Main St., Baltimore, has been awarded the contract to erect a 2-story warehouse and office building on Main St., Arlington, for Charles T. Cockey, from plans by Stanislaus Russell, 2900 Clifton Ave., Baltimore. Hot-air heat, gas and electric lighting will be installed.

BALTIMORE, MD.—Plans and specifications have been completed by P. E. Beall, Arch., 213 St. Paul St., for the proposed warehouse to be erected at Pulaski and Franklin Sts., for the H. P. Bumphrey Co., 2566 Hollins St. It will be three stories, of brick, 30 × 65 ft., with a slag roof, gas and electric lighting, plumbing and glass partitions.

Franklin P. Cator has purchased the property on German St., near Charles St., and has commissioned Wyatt & Nolting, Archs., Keyser Bldg., to prepare plans and specifications for an addition to the present building of Armstrong, Cator & Co. The real estate transactions involved $25,000, and when completed the building will cost about $100,000.

Frank & Kavanagh, Archs., 324 North Charles St., have been commissioned by Hecht Bros. & Co., 681 West Baltimore St., to prepare plans and specifications for their proposed warehouse to be erected on German St., in the rear of their present building. It will be six stories high, of brick, stone and concrete, with a slag roof, steam heat, gas and electric lighting, galvanized iron cornice, plumbing, etc. Cost, $60,000.

BALTIMORE, MD.—It is reported that Ralph Goldman, 2126 Madison Ave., is receiving bids on the proposed addition to the "Kaiser" at 2126 Madison Ave. Plans were prepared by J. Edward Laferty, Arch., 11 East Pleasant St. It wil be three stories high, of brick and concrete, with roof garden, tile roof, electric lighting, stone trim, terrazo work, plumbing, etc.

Charles E. Cassell, Arch., Law Bldg., has been commissioned by J. Olney Morris, 920 Madison Ave., to prepare plans and specifications for his proposed building at 1224 Madison Ave. It will be three stories, of brick, 31 × 95 ft., with tin roof, steam heat, gas and electric lighting, plumbing, etc.

HAGERSTOWN, MD.—The plans and specifications for the proposed hospital to be erected in Hagerstown, under the supervision of Dr. Henry M. Hurd, of Johns Hopkins Hospital, were completed recently by James H. Ritchie, 8 Beacon St., Boston, Mass. The building is being erected for the Washington County Hospital Association, and will cost, for construction alone, about $75,000. It will be two and three stories high, of brick, stone and stucco, and will be fireproof throughout. Bids will be received about Nov. 15.

WASHINGTON, D. C.—Bids were received, on Nov. 8, by the Commissioners of the District, Washington, for the construction of a chemical engine house: George E. Wyne, $28,700; Skinker & Garrett, $28,621; W. H. McCrary, $32,000; Burgess & Parsons, $29,597; W. E. Mooney, $29,875; Randolph L. Jennings, $30,909; H. J. Montgomery, $29,650; Thomas J. Melton, $27,763; Boyle-Robertson Co., $28,763; Hoge & Luebkert, $28,342; all of Washington, D. C.

HUNTINGTON, W. VA.—W. T. Mills, of Columbus, Ohio, is preparing plans for a theater to be erected in this city, at a cost of about $175,000. The structure will be a combined theater, store and office building.

WAYCROSS, GA.—The contract for erecting a hotel on St. Simon's Island has been awarded to C. E. DUNN, of Waycross. It will contain 60 rooms.

SAVANNAH, GA.—Plans have been prepared by Mowbray & Uffinger, Archs., 56 Liberty St., New York, for a bank and office building for the Savannah Banking & Trust Co., at Savannah. The structure will be eight stories high, of stone, steel and brick construction and will cost about $300,000.

TAMPA, FLA.—The lowest bid received on Oct. 25 by H. S. Thomas, Engr., Tampa Union Station Co., for the erection of a brick and stone union station, 80 × 133 ft., 40 ft. high, was that submitted by the King Lumber Co., of Charlottesville, Va. Estimated cost, $90,000. The bids have been referred to C. H. Bix, Pres.

TROY, ALA.—James Knox Taylor, Superv. Arch., Treasury Department, Washington, D. C., has awarded the contract for the construction of a post-office at Troy to JOHN F. JENKINS, of Gainesville, Fla., at $34,200. Bids were received on Oct. 24 and noted on Oct. 27.

DEMOPOLIS, ALA.—Bids were received as follows on Nov. 7, by James Knox Taylor Superv. Arch. Treasury Dept., Washington, D. C., for the construction of a post-office at Demopolis; Algernon Blair, Montgomery, Ala., $39,790; A. Anderson & Co., St. Louis, Mo., $36,922; Cecil L. Saunders, Hot Springs, Ark., $38,700; D. J. Phipps, Newport News, Va., $39,938; Barnes Bros., Greenville, Ill., $46,000; King Lumber Co., Charlottesville, Va., $38,890.

NEW ORLEANS, LA.—We are officially advised that bids will be received until Nov. 11 for the erection of a Museum of Art in the city park by Lebanbaum & Marx, Chicago Savings Bank Bldg., Chicago, Ill. It will be two stories high, and will cost $150,000. Noted last week.

MEMPHIS, TENN.—We are officially advised that the SOUTHERN FERRO-CONCRETE CO., Equitable Bldg., Atlanta, Ga., has been awarded the contract for designing and erecting all of the reinforced-concrete skeleton work in connection with the Falls Building, at Memphis. The Chickasaw Building Co. is the owner, and the VALLEY CONSTRUCTION CO. is the general contractor. The building will be 100 × 150 ft., and is to be ten stories high with a basement, of reinforced concrete skeleton with brick curtain walls. The general contract amounts to $200,000, and the reinforced-concrete skeleton contract is about $80,000. The work is to be started immediately and is to be completed by Sept. 1, 1911.

MEMPHIS, TENN.—A passenger depot is contemplated at Calhoun Ave. and South St. by the Frisco System, the Rock Island and Illinois Central railroads. F. L. Thompson is Engr. of Bridges and Buildings, at Chicago, Ill., of the I. C. R. R.

NASHVILLE, TENN.—A Methodist hospital is to be erected here some time next year by the Methodist Episcopal Church, South, at an estimated cost of $250,000, it is stated.

CLEVELAND, OHIO.—Bids will be received until Nov. 22 by Edward A. Roberts, Clk., City Hall Comn., for excavation and foundation to grade line. J. Milton Dyer, Cuyahoga Bldg., is Arch.

COLUMBUS, OHIO.—Plans have been approved by the officials of the Ohio State University, prepared by Architects Allen & Collens, 6 Beacon St., Boston, Mass., for a library building to be erected on the grounds of the university in North Columbus. The building will be 200 × 150 ft. and three stories high. Bids will be asked for soon. Noted on Oct. 13.

PORTSMOUTH, OHIO.—Bids were received for the construction of the high school building on Oct. 28 as follows: E. K. HIBBS, Columbus, $158,470 (awarded contract); Roche-Brunner, $158,900; Martin Bros., $164,734; Glick & Prescott, $200,000. These bids do not include the electrical wiring, heating, ventilating and gas fitting. Bids for that class of work were: Heating and ventilating, Blake & Smith, $18,655; Peck Anderson, $22,500; Brice Heating Co., $18,973; Lewis & Kitchen, $19,650; W. H. Conklin, Columbus, $18,879; Hoffman & Conklin, Columbus, $19,725; S. A. Esswein, Columbus, $20,325; Fitzpatrick & Hoepfner, Columbus, $20,178. The contract for this work was not awarded. The entire bid of E. K. Hibbs, Columbus, successful contractor, including heating, ventilating, gas fitting and electrical wiring was $184,947. That of Riche and Brunner was $185,000. Electrical wiring, Roche & Brunner, $21,000; heating and ventilating, Roche & Brunner, $17,900; gas fitting, $900.

ASHLAND, OHIO.—A bond issue was recently carried for the purpose of erecting two school buildings in North Ashland. One will be an 8-room building, to replace the old, condemned structure used for a school house on Pleasant St., and the other north of the Erie R. R., in the vicinity of North Orange St., or the Troy road. The latter is to be a 4-room building. Address the Secretary of the Board of Education. Cost, $50,000.

CRESLINE, OHIO.—We are officially advised that bids will be received until noon, Nov. 10, by the Board of Education, R. G. Mann, Clk., for the erection of a 2-story fireproof high school, 114 × 120 ft., of brick. Howard & Merriam, Capitol Trust Bldg., Columbus, are the Archs. Cost, $40,000.

CLEVELAND, OHIO.—Charles L. Pack, 308 Euclid Ave., is promoting a plan to erect a hotel at the northwest corner of Euclid Ave. and East Twelfth St., on property owned by him. The avenue frontage of the lot is 104 ft., and it extends back on Twelfth St. for 379 ft. The building will cover the entire lot, and will be 16 stories in height, the limit allowed by the Cleveland building laws. The hotel will contain more than 800 rooms, and will cost about $2,000,000. E. M. Statler, Ellicott Sq., Buffalo, N. Y., is interested.

HARTFORD CITY, IND.—The Pennsylvania R. R., Co. is planning to erect a brick and stone passenger station on South Jefferson St. Estimated cost, $40,000. H. K. Leonard, Engr. of Bridges and Buildings, of Philadelphia, Pa.

INDIANAPOLIS, IND.—The following contracts have been awarded by the Spann Building Co., recently incorporated, as noted on Oct. 27, for the erection of a hotel and storage building at the corner of Massachusetts Ave. and East St. It will be three stories high and 145 × 204 ft., of brick, stone, steel and terra cotta. Brick—PERRY & BOCK, 124 East Court St.; iron—HETHERINGTON & BERNER, 19 West South St.; stone—G. ITTENBACH & CO., 916 Harrison St.; terra cotta—the INDIANAPOLIS TERRA COTTA CO., Brightwood; cement—CHARLES SCHWERT; lumber and mill work—MAAS-NEIMEYER LUMBER CO., 22d and Monon Sts. The estimated cost of the building is $65,000 and equipment, $10,000.

MISHAWAKA, IND.—E. G., J. C. and F. G. Eberhart will soon ask for bids for the construction of a memorial church for the First Methodist Episcopal Church Congregation in this city. The building, which is to cost $100,000, will be a gift to the Congregation by the brothers.

GRAND RAPIDS, MICH.—Williamson & Crow, Gilbert Bldg., have about completed plans for a street car barn and office building for the Grand Rapids R. R. Co. J. C. Maddigan is Gen Mgr. The owners will purchase materials and let all contracts. Estimated cost, $50,000.

MARQUETTE, MICH.—At a recent meeting of the Directors of the Marquette Masonic Associaion it was decided to build a Masonic Temple. The building, as planned, will be of stone or brick construction, three stories high, facing on Front St., with a ground floor auditorium, with a Bluff St. entrance. The structure will cost between $65,000 and $70,000. M. M. Duncan, F. M. Moore, F. A. Bell and others are Dirs.

GRAND RAPIDS, MICH.—HAUSER, OWEN & AMES, 102 North Ottawa St., have been awarded the general contract and the CENTRAL BOILER & SUPPLY CO., 530 Canal St., the heating contract, for the 5-story store and loft building which is to be erected for the Hazelton & Perkins Drug Co. The Bradford Engineering Co., 326 Murray Bldg., is the Arch. Cost, $50,000.

CHICAGO, ILL.—Mandel Bros. plan to replace their present building at the northeast corner of State and Madison Sts. with a 15-story structure, from plans drawn by Holabird & Roche, Archs., Monadnock Block. The proposed building will cover the same ground space as the present one, 150 ft. on State St. and an equal distance on Madison, extending to Holden Court. Its height will be 247 ft. above grade, with three stories below the ground level. In the construction, 12,000 tons of steel will be used. It is expected that the structure will be completed in time for the fall opening of 1911. Up to the fourth floor, the exterior of the building will be of polished granite. Above that level, terra cotta or Bedford stone will be used. There will be 55 caissons, extending downward to bed rock, will provide an enduring foundation for the new structure. About 1,830,000 cu. ft. of clay will have to be removed to install the basement and foundation piers. Located in the sub-basement, there will be modern ventilating apparatus, with air-washing and temperature devices that will supply 2,000 cu. ft. of pure air each hour for every person on every lower floor, estimating 1,000 people to each floor. There will be 30 elevators of latest, smooth-running, hydraulic type, and two sets of elevators and escalators for the employees will be installed. The contracts for the steel work were let some time ago to the American Bridge Co. It will be erected in two sections. Estimated cost, $2,000,000. Noted on Sept. 1.

The Hamilton Club, of Chicago, 135 Monroe St., plans to erect a club house at 148-150 Dearborn St., the site of Hunts Hotel. The lot is 95 × 150 ft. The cost is estimated between $250,000 and $300,000.

PARIS, ILL.—The American Tobacco Co. has purchased a 39-acre tract of land, adjoining the tracks of the Cleveland, Cincinnati, Chicago & St. Louis Ry. Co., for the purpose of erecting warehouses for the storage of leaf tobacco in hogsheads. The company will not manufacture their products here. Estimated cost, $40,000.

LITCHFIELD, ILL.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, has awarded the contract for the construction of a post-office at Litchfield to the CULVER CONSTRUCTION CO., of Springfield, Ill., at $56,070.

MASON CITY, IOWA.—The Independent Order of Odd Fellows plans to establish a retreat for aged members at Mason City, to cost $62,000. S. Stevenson, of Council Bluffs, is Grand Master.

AMES, IOWA.—We are officially advised that bids were received by D. A. Emery, Secy., of the State Board of Education, Capitol Bldg., Des Moines, on Nov. 3 for the erection and completion of a group of six buildings for the use of the veterinary department, Iowa State College, at Ames. The contract was let to **BENSON & MARXER**, of Des Moines. The cost of the building is $135,000 and equipment, $25,000.

MINNEAPOLIS, MINN.—The contract for the Loring Park Hospital to be erected by Dr. G. G. Eitel and associates has been awarded to **H. L. STEVENS & CO.**, of Minneapolis. Work will commence March 1, we are officially advised.

ST. PAUL, MINN.—The Board of Police Commissioners, W. A. Hardenbergh, Chn., will soon receive bids for the construction of a central police station at Market and Third Sts. It will be three stories high, the basement containing 80 cells and ten women's cells. The structure will contain two municipal court rooms and offices. Reed & Stem, Endicott Bldg., are the Archs.

Dr. Arthur Sweeney, Lowry Bldg., St. Paul, heads a syndicate of local physicians who propose to establish a sanatorium for the treatment of nervous diseases along the River Boulevard. Permission to build a 4-story brick and concrete structure, costing $100,000, is now being asked of the City Council.

ST. PAUL, MINN.—The Northwestern Telephone Exchange Co., C. P. Wainman, Vice-Pres., has awarded the contract for the general construction of the 6-story pressed brick and cut stone, fireproof main telephone exchange building, at Fifth and Cedar Sts., to the WILLIAM J. HOY CONSTRUCTION CO., Metropolitan Bldg., city. Reed & Stem are Archs. Cost, $75,000.

Local press reports state that the Sisters of the Visitation plan to construct a modern convent building on the block bounded by Fairmount, Osceola and Grotto Sts., to replace the present structure at Robert St. and University Ave. Cost, $75,000.

The State Board of Control, Charles Halverson, Chn., will receive bids until 2 p. m., Nov. 28, for the construction of a 4-story pressed brick, cut stone, fireproof engineering building to be built at the University of Minnesota. C. H. Johnston, Capital Bank Bldg., is Arch. Cost, $250,000.

WILLMAR, MINN.—James Knox Taylor, Superv., Arch., Treasury Dept., Washington, has awarded the contract for the construction of a post-office at Willmar to ANDREW BJORSELL, of Willmar, at $39,527. Bids were received on Oct. 4 and noted on Oct. 27.

OMAHA, NEB.—The U. S. National Bank plans to begin construction work about Jan. 1 on a 20-story building to be erectel at the corner of Farnam and 16th Sts., on the site of the present structure. The project represents an expenditure of about $2,000,000. The present building will not be disturbed at once, for the rear half of the new building will be erected first, and then moved into while the old building is next torn down.

A freight house at Twelfth and Davenport Sts. is to be erected by the Illinois Central R. R. W. L. Park, Vice-Pres., of Chicago, Ill., recently visited Omaha, it is stated, and made arrangements for its construction. John R. Webster, representative of the Omaha Bridge & Terminal Co., which is the terminal holding corporation of the I. C. R. R., recently announced that the structure would be erected. Cost, $100,000.

FAIRBURY, NEB.—James Knox Taylor, Superv. Arch., Treasury Department, Washington, D. C., has awarded the contract for the construction of a post-office at Fairbury to D. J. PHIPPS, of Newport News, Va., at $56,520; time, April 1, 1912. Bids were received on Oct. 15 and noted Oct. 20.

*LEAD, S. DAK.—Bids will be received until 3 p. m., Dec. 14, by James Knox Taylor, Superv. Arch., Washington, D. C., for the construction, complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring), of the U. S. post-office at Lead.

FORT D. A. RUSSELL, WYO.—Bids will be received until 9.30 a. m., Nov. 14, by Capt. F. S. Armstrong, Q. M., Keefe Hall, Cheyenne, for the completion of the new Post Hospital at Fort D. A. Russell.

KANSAS CITY, MO.—We are officially advised that the contract for the Linwood Theater to be erected on Troost Ave., has been awarded to **H. L. STEVENS & CO.**, of Kansas City. Work will commence at once.

ST. LOUIS, MO.—The Lutheran churches of St. Louis recently voted to erect a church in the West End. Harry King, 1605 North Euclid Ave., and Prof. Louis Becker are interested. It will cost about $50,000.

HOUSTON, TEX.—Plans have been prepared for a 6-story fireproof office building at the corner of Prairie Ave. and Main St. for Krupp & Tuffly, at an approximate cost of $150,000.

Arrangements have been made by which M. E. Foster, 2915 Main St., will construct a new building at the corner of San Jacinto St. and Texas Ave. The structure will be three stories, and will cost about $40,000.

Plans are being prepared for an 8-story apartment house at Main and Pease Sts., to be erected by the Lamb-McAshan Co. It will be 44 × 100 ft., with a high basement, making it practically nine stories. E. C. Lamb is Pres.; S. E. McAshan, Vice-Pres.; and R. E. Field, Secy. Cost, $90,000.

*PORT ARTHUR, TEX.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, has awarded contract for the construction of a post-office at Port Arthur to **TOM LOVELL & SON**, of Denton, Tex., at $110,668. Bids were received on Sept. 9.

SEATTLE, WASH.—Definite plans have been formed by Frank Goodwin, of the Goodwin Realty Co., in regard to the erection of a building upon the site now occupied by the Goodwin Market on Pike Pl. Mr. Goodwin recently stated that he will start work shortly on plans for a 3-story reinforced concrete building, 320 × 100 ft., for department store purposes. The structure will cost about $100,000, and will be known as the Public Market and Department Store Co. Bids will be asked for about May 1.

PORTLAND, ORE.—The American Women's League plans to construct a club house in Portland, to cost $75,000, it is reported.

The contract to erect an office building at Sixth and Washington Sts., for Theodore B. Wilcox, has been awarded to the **STONE & WEBSTER ENGINEERING CORPORATION**, 147 Milk St., Boston, Mass., at a cost of $350,000.

WOODLAKE, CAL.—We are officially advised that Homer W. Glidden, Arch., Wright & Callender Bldg., Los Angeles, has completed plans for a 2-story and basement tourist hotel here for Gilbert F. Stevenson, of Hollywood, to be known as "Woodlake Inn." The main building will be 72 × 135 ft., and the dining room wing, 40 × 100 ft. The foundation is now being constructed, and the erection of the superstructure will start the first of next year. Cost, $40,000. Noted on Oct. 13, under "Woodside, Cal."

LOS ANGELES, CAL.—The General Osteopath Association has secured a permit and let a contract to **J. C. DAVIS** for erection of a 4-story building for the Columbia Hospital, at 1243 Orange St. Norman F. Marsh, Arch., Broadwell City Bldg., prepared the plans. The cost will be $100,000.

Arrangements have been completed for the erection of a 3-story brick and steel building at 621 and 623 South Spring St. by William Garland, Union Trust Bldg., Los Angeles. The estimated cost of the structure is $55,000.

SACRAMENTO, CAL.—Henry H. Meyer, Bliss & Faville, and Fred. H. Meyer, Archs., of this city, have been asked to submit competitive designs for a large Class A commercial building which is to be erected by the D. O. Mills Bank in Sacramento. The building will cost in the neighborhood of $300,000.

SAN FRANCISCO, CAL.—Plans are being prepared by Emil De Nuef, City Arch., Hewes Bldg., for a 3-story reinforced Class B building, to be erected on Mint Ave., near Fifth St., to be occupied as headquarters by the Fire Department and its Chief. Estimated cost, $60,000.

OCEANPARK, CAL.—The **ALTA PLANING MILL CO.**, Eighth and Alameda Sts., Los Angeles, have signed a contract to erect all the buildings, and the scenic railway to be constructed, on the concrete pier being erected here for A. R. Fraser. The work will be done on a percentage basis, and will cost $350,000.

Eager & Eager, Archs., Story Bldg., Los Angeles, and A. F. Rosenheim, Arch., H. W. Hillman Bldg., are preparing plans for a theater to be erected on the pier for Clune, Wheelock & Boland, of Los Angeles, to seat 1,000.

PASADENA, CAL.—The **E. O. NAY CO.** has been awarded the contract for installing the plumbing and steam-heating in the new Y. M. C. A. building here. Cost, $17,500. A. B. Benton, 114 North Spring St., Los Angeles, is the Arch.

MONTREAL, QUE.—Finley & Spence, Archs., are reported to have completed plans for a new 10-story fireproof building for the Central Light, Heat & Power Co. Work will be commenced next spring. S. Carsley is Pres., at Montreal.

TORONTO, ONT.—At the coming municipal elections the ratepayers will vote on by-laws for the following public improvements: Bloor St. viaduct, $750,000; Ashbridge Bay improvements, $500,000; car line extensions to be built by the city, $750,000; good roads, $100,000+ garbage disposal system, $300,000; Parliament St. viaduct, $175,000; Coxwell Ave. subway, $75,0000. H. Rust is City Engr.

PORTAGE LA PRAIRIE, MAN.—Thompson Bros., wholesale dealers of boots and shoes, of Duluth, Minn., have purchased a site here, and will erect a 7-story brick and stone block.

WINNIPEG, MAN.—The Provincial government has purchased 1,500 acres facing the Red River, about 12 miles north of Winnipeg, for a penetentiary, farm and buildings. Hon. Robert Rogers, of Winnipeg, is Minister of Public Works.

W. J. Beach has ordered plans for a 6-story hotel, to contain 90 rooms and an 80-ft. bar, as well as plunge baths and other modern equipments.

John Haffner, 367 Main St., has completed plans for an office building to be erected here, at a cost of $100 000. Work will start at once.

The Canadian Pacific Ry. Co. has purchased a site here and will erect a skyscraper for a downtown office building. Work will probably be started early next year. Address John Tait, Gen. Supt. of Telegraphs.

WINNIPEG, MAN.—The School Board has decided upon the erection of school houses to cost $600,000. Address R. H. Smith, Secy. of Bd.

The **CARTER, HALLS, ALDINGER CO.**, of Chicago and Winnipeg, has been awarded the contract for a warehouse for the Hudson's Bay Co. ,according to plans prepared by John Woodman.

PRINCE ALBERT, SASK.—E. R. Tripp, of Vancouver, has bought a site at First Ave. and Eleventh St. for $50,000, and will erect a hotel costing $150,000.

NEW WESTMINSTER, B. C.—A. R. Snelgrove has purchased a site for $78,000 at the corner of Columbia and Hegbie Sts., upon which to erect a 6-story store and office building.

VICTORIA, B. C.—Bids will be received until Nov. 28 by the Minister of Public Works, Victoria, B. C., for the manufacture, delivery and unloading at Walhachin (Penny's) station on the C. P. Ry., 218 miles east of Vancouver, of steel substructure over the Thompson River; a separate bid will be received at the same time for the erection and completion of the substructure and a further separate bid will be received for the erection and completion of the superstructure. Plans at office of F. C. Gamble, Public Wks. Engr., Victoria.

MEXICO CITY, MEX.—We are officially advised that the **WILLIAM P. CARMICHAEL CO.**, Fullerton Bldg., St. Louis, Mo., has been awarded the contract for the design and construction, in reinforced concrete, of the proposed Braniff Hotel to be built at the intersection of Avenida Morelos and the Paseo de la Reforma in the City of Mexico. The "raft foundation," exterior walls, interior partitions, as well as all columns, girders and floor slabs will be of monolithic reinforced concrete.

## WATER SUPPLY—IRRIGATION

*(* Denotes that this work is advertised in Engineering News.)*

MILLIS, MASS.—The contract for laying water pipe here has been awarded by the city to the HANSCOM CONSTRUCTION CO.

SOUTH HADLEY FALLS, MASS.—Fire District No. 1, on Oct. 29, voted to construct a water system in the Granby Road district. Estimated cost, $12,000.

SPRINGFIELD, MASS.—The following bids were opened on Oct. 25 by the Water Commissioners for (a) 1,800 tons of c.-i. water pipe and (b) specials: R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa., (a) $22.30 per ton, (b) $48; U. S. Cast Iron Pipe & Foundry Co., 71 Broadway, New York, (a) $22.05, (b) $49; F. A. Houdlette & Son, 93 Broad St., Boston, (a) $22.35, (b) $50; Warren Foundry & Machine Co., Philipsburg, N. J., (a) $23.75.

WEST SAYVILLE, N. Y.—The South Bay Water Co., Patchogue, N. Y., will build a pumping station here.

*BINGHAMTON, N. Y.—Bids were received by the Water Commissioners on Nov. 1, for constructing a 5,000,000-gallon distributing reservoir. The work involves about 2,900 cu. yds. of concrete, plain and reinforced, and about 50,000 cu. yds. of excavation. Contract has been awarded to the SAND & GRAVEL CO., Liverpool, Ohio, at $54,329. Clinton L. Bogert, 57 East 129th St., New York, is Des. Engr.; John D. Davidson is Secy. Bd. of Water Comrs.

YONKERS, N. Y.—The Otis Elevated Co., Yonkers, has filed plans for a steel water tower 175 ft. high and a 150,000-gallon water tank on Woodworth Ave.

HARRISBURG, PA.—The Board of Water and Light Commissioners received bids on Oct. 31 for the construction of an auxiliary pumping station at Reservoir Park. Contract has been awarded to STAPF & BENFER, Harrisburg, at $6,448.

SOMERSET, PA.—The borough is considering the construction of water-works improvements, to cost $25,000.

CHAMBERSBURG, PA.—Contract has been awarded to the H. C. BROOKS CONTRACTING CO., Clarksburg, W. Va., for laying eleven miles of 14 and 16-in. c.-i. pipe for carrying the city's water supply by the gravity system.

PITTSBURG, PA.—Bids are asked by the City Controller until 10 a. m., Nov. 24, for laying c. i. hub and spigot water pipe, North Side City Home fire system, Warner Station, Pa. N. S. Sprague is City Engr.

PATERSON, LA.—Bonds for $30,000 for the construction of water-works have been sold by the city. Noted on Nov. 3.

KENNER, LA.—The St. Charles Land Co. will spend about $150,000 for improvements at Kenner. The work is to include reservoir system in connection with reclaiming of 7,500 acres of land, a canal, 2½ miles long, 45 ft. wide, 8 ft. deep, and ten miles of canals one-half mile wide and 3 ft. deep; also 100 miles of ditches 4 ft. wide and 3 ft. deep. John A. Kruse is Consult. Engr., 706 Goff Bldg., Chicago, Ill.

NEW PHILADELPHIA, OHIO.—The City Council on Oct. 27 passed an ordinance appropriating $130,000 to be raised from the sale of bonds for the purchase of the water plant which has been operated by a private corporation. The transfer of the property was effected on Nov. 1. Clyde Knisely is City Engr.

CLEVELAND, OHIO.—Plans have been prepared for extensions to the water-works system. Bids will soon be asked for equipment, which will include two 25,000,000-gallon pumping engines for the Kirkland pumping station, to replace the two 15,000,000-gallon low-duty pumping engines now in use. The plans call for the erection of a high-pressure pumping station with four centrifugal units with a capacity of 10,000 gallons per minute and a 270-lb. pressure. It has not yet been decided whether to install gas engines or electric motors to operate the pumps, for which 2,000 HP. will be required. Robert Hoffman is City Engr.

NEWARK, OHIO.—Contracts for water-works extensions, bids opened on Oct. 28, have been awarded as follows: To WHITE & WEBB, Newark, for 1,092 lin. ft. of trenching and laying 16-in. pipe and specials and back filling, 60 cts.; 1,500 lin. ft. 10-in., 75 cts.; 444 lin. ft. 8-in., 34 cts.; 17,796 lin. ft. 6-in., 29 cts.; setting 28 hydrants, each, $4; setting 48 6-in. gate valves, $1.65; setting two 10-in. gate valves, $2; setting two 16-in. gate valves and building valve chambers, $35; resetting 16-in. valve and other work; $47.50 relaying 120 sq. yds. brick pavement, $1.10; 150 tons drayage, 48 cts.; total, $7,609. To JAMES B. CLOW & SON, 350 Franklin St., Chicago, Ill., for c.-i. pipe and specials at $3,158, and to the GAMON METER CO., for all bronze meters and connections. C. H. Wells is City Engr.

WEST CARROLLTON, OHIO.—Bids will be received by John S. Heeter, Clk. Bd. Pub. Affairs, until Nov. 16, for the proposed extension and improvements of the water-works as follows: (1) Constructing pumping station; (2) furnishing and installing pumping machinery, operated either by internal combustion engines or by electric motors; (3) furnishing c.-i. pipe and special castings; (4) laying c.-i. pipe and special castings and setting hydrants, valves and valve boxes; (5) constructing reinforced concrete reservoir.

COLUMBUS, OHIO.—The contract for furnishing motor-driven pumping machinery for the Scioto River pumping station has been awarded to the PLATT IRON WORKS CO., Dayton, at $8,549. W. Jackson is Supt. W-Wks.

DETROIT, MICH.—The Common Council on Nov. 1 approved the assignment of the contract for the erection of the $150,000 Fairview pumping station from the Carey Construction Co., Celeveland, Ohio, to the HUNKIN-CONKEY CONSTRUCTION CO, Cleveland. J. J. Haarer is Comr. Pub. Wks.

MORRISTOWN, ILL.—The [illegible]ns have voted $10,000 of bonds for th[illegible]struction of a municipal water system.

HIGHLAND PARK, ILL.—T[illegible] Board of Local Improvement on Oct. 18 [illegible]ded to T. H. IGLEHART, Rookery Bldg.[illegible] contract for constructing a c-i. interna[illegible]n water supply pipe 10-in. diameter in[illegible]den and Cedar Aves. and Sheridan Road[illegible] $10,113.

MORTON, ILL.—A. EVERET[illegible] Washington, Ill, has received the contra[illegible] laying 3,000 ft. of new water mains [illegible]e eastern part of the town.

*PEORIA, ILL.—Bids recei[illegible] by the Supervisors of Des Moines Cou[illegible]at Burlington, Iowa, on Oct. 28 for fu[illegible]ng and erecting a complete pumping sta[illegible]including the buildings and machinery[illegible]ve been rejected and new bids will be [illegible] The pumping plant will be used for [illegible]age of agricultural lands, will have a [illegible]ity of 52 cu. ft. per sec. against a he[illegible] 12 ft., exclusive of friction. It will co[illegible] of two centrifugal pumps each direct [illegible]ted to a tandem compound high-speed [illegible]m engine; one water-tube boiler for [illegible]orking pressure of 150 lbs. per sq. in.[illegible]uipped with superheater for 125° sup[illegible]; induced draft, duplicate feed water sy[illegible]n; and open heater. For further informa[illegible] plans and specifications, address the Ha[illegible]n Engineering Co., 120 Fredonia Ave., [illegible]oria.

CENTRALIA, ILL.—The City Council, on Oct. 28, awarded the contract for cleaning water mains to the NATIONAL MAIN CLEANING CO., New York, at the following prices: Cleaning 10,375 ft. of 12-in. main at 24 cts. per ft.; 10,000 ft. of 10-in., 21 cts.; 7,500 ft. of 8-in., 19 cts.; 3,000 ft. of 6-in., 17 cts. Total, $6,525.

LAMOTTE, IOWA.—Bids will be received Nov. 15 by N. A. Hoffman, City Recdr., for laying water mains. About 3,100 ft. of 4-in. pipe, including seven hydrants and four shut offs will be required.

DAVID CITY, NEB.—T. B. Meyers, City Clk., will receive bids until 8 p. m., Nov. 11, for the extension, enlargement and improvement of the water system. Bids will be received for the power-house, machinery foundations and sub-base for steel stack; compressor, pump and well connections; hydrants, laying mains, and reservoir.

LINCOLN, NEB.—Bids will be received about Nov. 15 for furnishing 50 tons of 16 6 nd 4-in. c.-i. pipe. James Tyler is Water Comr.

BEATRICE, NEB.—Bids will be received by the City Clerk until 2 p. m., Nov. 15, for improvements to the water-works system, including a 1,000,000-gallon reservoir, addition to pumping station, etc. W. K. Palmer Co. are Engrs., 717-720 Dwight Bldg., Kansas City, Mo.

RUGBY, N. DAK.—Henry Nelson, City Clk., will receive bids until Nov. 27 for furnishing water meters for three years, ending Dec. 31, 1913, prices to be on single meters and in dozen lots.

BELLE FOURCHE, S. DAK.—Bids for constructing water-works will be received by the Mayor and Council until 3 p. m., Nov. 14. D. R. Evans is Mayor.

CHEYENNE, WYO.—The city is considering the construction of a filtration plant. Estimated cost, $50,000.

LIBBY, MONT.—See item under Light and Power Plants.

KANSAS CITY, MO.—The contracts have been awarded as follows bids opened on Oct. 27 for installing sluice gates, hydraulic cylinders, etc., for the intake pier: To COFFIN VALVE CO., Neponset, Mass., screen frames at $17,800; for intake pier, GREAT WESTERN MFG. CO., Leavenworth, Kan., $4,990; for pipe and special castings, DIMMICK PIPE CO., Birmingham, Ala., at $6,000. E. B. Harrington is Secy. Bd. Fire and Water Comrs.

TEXARKANA, ARK.—Preliminary preparations have been made by the Texarkana Water Corporation for the first extension of the 25,000 ft. of new water mains to be laid on the West Side. An extension of 2,500 ft. will be laid along Lelia St. to the new factory site addition and to the plant of the Texas Glass Co. This main will be laid as soon as the Texas Glass Co. determines the number of hydrants that are needed to give proper fire protection to its property.

DALLAS, TEX.—The contract has been awarded to the DIMMICK PIPE CO., Birmingham, Ala., for about 700 tons of 6, 8, 10 and 16-in. pipe at $25.89 per ton for pipe and $49.75 per tno for specials.

ROGERS, TEX.—The citizens voted on Oct. 18 to issue $14,000 of bonds for the construction of water-works.

SAN AUGUSTINE, TEX.—The citizens on Oct. 18 voted to issue bonds for the construction of a water-works system.

EL PASO, TEX.—Felix Martinez and Silverberg Bros. have sold 43 parcels of land eight miles from here, in lower valley, to Ernest Haauck and I. W. Hoene[illegible] who are planning to install a large pumping plant to irrigate the land.

YUKON, OKLA.—We are officially advised that plans and specifications for water-works and sewers for Yukon have been completed and bids will be asked within a few weeks. Burns & McDonnell are Consult. Engrs., Scarritt Bldg., Kansas City, Mo.

GUNNISON, COLO.—Plans, specifications and estimates, we are officially advised, are being prepared by Burns & McDonnell, Consult. Engrs., Scarritt Bldg., Kansas City, Mo., for improvements to the water-works and lighting plant here. The plans include the development of power from the Gunnison River for the operation [illegible] both the water and lighting plants.

SEATTLE, WASH.—The Cou[illegible] has passed ordinances providing for [illegible] laying of water mains in various streets. [illegible] H. Thomson is City Engr.

SUNNYSIDE, WASH.—The [illegible]retary of the Interior has granted a[illegible]xtension of time to George Cooke & S[illegible], Spokane, Wash., to Dec. 9, for the com[illegible]tion of the upper section of the Sulphur [illegible]reek wasteway, Sunnyside project, Wash.

PORT ANGELES, WASH.—The City Council is considering piping the water of the Olympic Hot Springs, into Port Angeles. The City Engineer is making the necessary survey.

ELLENSBURG, WASH.—The City Engineer has completed a preliminary survey for a water system for the city. The water will be piped from Lake Cle Elum, 33 miles, to Ellensburg. Estimated cost, $8,000 a mile.

COULEE CITY, WASH.—H. P. Vermilye, Pres. Columbia Basin Land & Orchard Co., of Tacoma, has let a contract to H. A. DEBOLT for the construction of the irrigation ditches four miles from here.

GRANTS PASS, ORE.—The Rogue River Power & Irrigation Co. will begin at once the construction of a large dam at Savage Rapids, seven miles from here.

JACKSONVILLE, ORE.—F. W. Dodge and Henry Wentworth have submitted the lowest bid to the city for the construction of the reservoir and pipe lines to supply water to the city.

VALE, ORE.—The citizens have voted to issue $[illegible] for the construction of a gravity water system from Willow Springs, twelve miles south of here.

TURLOCK, CAL.—The Turlock Irrigation District has awarded contract to HOSKINS BROS., Turlock, for work on the irrigation canal at [illegible] cts. per cu. yd.

MODESTO, CAL.—Bids will be received by Charles [illegible] Abbott, Secy. Bd. of Directors of the Modesto Irrigation District, until 10 a. m., Nov. 11, for the construction of hydraulic fills at the sites of Mill Gulch flume, flume "E" and lower Dominici flume.

SAN FRANCISCO, CAL.—The City Council has approved plans for laying pipes of the high-pressure water system for fire protection in Dolores St., between 18th and 22d Sts. Marsden Monson is City Engr.

LONG BEACH, CAL.—The Alamitos Land & Water Co. is preparing to enlarge its water system. It is the intention of the company to double the system and extend it throughout the city. New mains will be laid and reservoir will be doubled in capacity.

OROVILLE, CAL.—See item under Light and Power Plants.

SAN DIEGO, CAL.—The San Diego Electric Ry. Co., H. McNutt, Ch. Elecn., has applied to the City Council for permission to lay a large salt water conduit in E St., to replace small conduit now in use.

PIMA, ARIZ.—Bids are asked by F. H. Abbot, Acting Comr., Office of Indian Affairs, Dept. of the Interior, Washington, D. C., until 2 p. m., Dec. 6, for the erection of a tank and tower at Pima School, Ariz.

TUCSON, ARIZ.—We are officially advised that L. C. Dietrich, City Engr., has been instructed to prepare plans and specifications for and to estimate the cost of a concrete and iron standpipe. Noted on Oct. 20.

PHOENIX, ARIZ.—The Secretary of the Interior, Washington, D. C., has approved the contract between the United States Reclamation Service and the EUREKA CANAL CO., an incorporated association, whereby the canals of the latter become a part of the Salt River irrigation project, Arizona. The property is valued at $9,269.

MONTREAL, QUE.—The Montreal Water & Power Co. has awarded to LAURIN & LEITCH, 5 Beaver Hall Sq., Montreal, the contract for a 30,000,000-U. S. gallon filtration plant. The contractors have awarded the mechanical portions of the contract to the NEW YORK CONTINENTAL JEWELL FILTRATION CO., 15 Broad St., New York.

WINNIPEG, MAN.—Bids addressed to the Chairman of the Board of Control will be received until Nov. 14 for supplying a quantity of c.-i. water pipe, valves and hydrants for domestic water works system. M. Peterson is Secy.

## SEWERS.

BRISTOL, R. I.—The contract has been awarded to LUKE H. CALLAN for extending sewer system in the eastern part of town at $32,000.

PROVIDENCE, R. I.—The following bids were received by the Board of Control for sewer work: F. A. Gammino, M. A. Gammino, F. E. Crankshaw, E. W. Everson and Charles Crankshaw.

HEMPSTEAD, L. I., N. Y.—Definite plans have been prepared by Civil Engr. Marshall for the construction of a sewerage system.

LAWRENCE, L. I., N. Y.—Plans of various disposal plants are under consideration by the Committee on Sewers.

PORT JERVIS, N. Y.—Sewer will be installed in Richard Ave.

SOUTH GLEN FALLS, N. Y.—A survey will be made by Consult. Engrs. Harry Reynolds and Louis Sebring, Schenectady, for a sewer system and disposal plant. The estimated cost is $40,000.

TROY, N. Y.—Bids will be received by the Board of Contract and Supply until 11 a. m., Nov. 15, for the labor, services and materials required in the construction of a sewer with necessary connections in Pine Woods Ave., from Elm Grove Ave. to Maple Ave. James M. Riley is Secy.

YORKVILLE, N. Y.—The citizens of this place have voted in favor of the proposition for constructing a sewer system. The estimated cost is $22,000. Plans were prepared by W. C. Stone, Civil Engineer, Utica, N. Y.

NEW YORK, N. Y.—Bids will be received at the office of George Cromwell, Pres. of the Boro. of Richmond, until noon, Nov. 22, for the construction of a sewer in Monroe Ave.

BROOKLYN, N. Y.—Bids will be received by Alfred E. Steers, Pres. of the Boro. of Brooklyn, until 11 a. m., Nov. 23, for the construction of sewers in various streets.

BLOOMFIELD, N. J.—All bids received by the Town Council for the proposed storm sewer in Westchester section have been rejected. The estimated cost is $13,000. Ernest Baechlin is Town Engr.

EAST ORANGE, N. J.—The construction of a separate sewerage disposal system is under consideration. The city has refused to combine with Orange, Montclair, Bloomfield and Glen Ridge in the construction of a trunk sewer.

McKEESPORT, PA.—Mayor Arthur has signed a resolution ordering the City Engineer to proceed at once with work of preparing plans for a complete sewer system, as required by State Board of Health.

MOUNT WASHINGTON, MD.—Tht Mount Washington Sewerage Co. is being organized for the construction of a sewerage system from Mount Washington along Western Run to Pikesville. Surveys are being made under the direction of the McLean Contracting Co., 902 Maryland Trust Bldg., Baltimore, Md.

TOWSON, MD.—The Baltimore County will construct storm-water sewer in Baltimore St. and Highland and Fairmount Aves. Henry G. Shirley is County Rds. Engr.

NORFOLK, VA.—The construction of a sewer between the Berkley Ward Main St. line and the St. Helena training station, is contemplated. F. V. Chambers is Civil Engr.

CHARLOTTESVILLE, VA.—Installation of sewerage system is being considered. The cost is estimated at $85,000. L. T. Hanckel is Mayor.

*RICHMOND, VA.—Bids will be received by the Committee on Streets until 4 p. m., Nov. 16, for the construction of about 13,000 ft. of sewers, from 2½ to 7½ ft. in diameter. Chas. E. Bolling is City Engr.

JELLICO, TENN.—The water-works and Sewerage Commission, J. A. Hackney, Chn., will expend $60,000 to $90,000 for the construction of a sewerage and water-works system.

LOUISVILLE, KY.—The contract for the construction of section B of the Frankfort Ave. sewer has been awarded to JAMES FERRY & SONS, Pittsburg, by the Louisville Comrs. of Sewerage. The estimated cost is $25,000.

SILVERTON, OHIO.—The citizens of this place contemplate laying water mains in the village so as to get Cincinnati filtered water. The improvement will cost about $18,000 and a vote will be taken on the issuing of bonds in this amount at the fall election.

BATTLE CREEK, MICH.—The construction of a sewer system has ben decided upon. The estimated cost is $6,000.

WAUKEGAN, ILL.—The contract for the construction of the Washburn Springs sewer has been awarded to WILLIAM MORAN & CO., Joliet, at $17,725.

LA PLATA, MO.—The construction of the proposed sewerage and water plant is under consideration. The cost is estimated at $75,000.

SHELBINA, MO.—The construction of a sewer and water system is under consideration by the city.

DALLAS, TEX.—J. B. Winslett, City Secy., has been instructed by the Municipal Commission to advertise for bids for installing a 5-in. sanitary sewer on Oakland Ave., from Texas & New Orleans Ry. to block between Grand and Clarence Sts.

BRYAN, TEX.—The construction of a sewer system is contemplated by the City Council. The cost is estimated at about $45,000.

YUKON, OKLA.—See item under Water Supply-Irrigation.

DENVER, COLO.—The contract has been awarded to the WESTCOTT DOAN INVESTMENT CO. for the construction of a sewer which is to be installed between Clayton and Adams Sts. on Sixth, Seventh and Eighth Aves. This company has also been awarded the contract for the improvements in sub-district No. 2 of South Capital Hill storm sewer district.

CHEHALIS, WASH.—The City Council passed an ordinance providing for the construction of a sewer in South Chehalis. The cost is estimated at $55,000.

PASCO, WASH.—The contract for building sewer system has been awarded to the NEWPORT ENGINEERING CO. at $66,255.55.

EVERETT, WASH.—The contract has been awarded by Board of Public Works for the construction of a trunk sewer in Capital Hill district, L. I. D. 235, to J. B. SNYDER.

DALLAS, ORE.—Louis C. Kelsey, Portland, will be appointed Consulting Engineer to prepare plans and specifications for the proposed sewer system.

ALAMEDA, CAL.—The City Council, Fred. Krumb, Chmn., has instructed Engineers Chapman and Griffit to prepare plans and specifications for the construction of a sewer to be known as the East Side sewer.

LOS ANGELES, CAL.—The contract has been awarded by the Board of Public Works to M. SALAS for the construction of a public sewer in Western Ave.

LOS ANGELES, CAL.—The City Council passed an ordinance for a sewer to be constructed in Buena Vista St. Also an ordinance for a sewer to be constructed in Buena Vista St., from Temple to Fort Moore Pl. Also ordinance for a sewer to be constructed in Broadway, from Ft. Moore Pl. to California St. H. J. Lelander is City Clk.

ESQUIMALT, B. C.—The installation of a sewer system is underconsideration.

## GARBAGE DISPOSAL.

*(* Denotes that this work is advertised in Engineering News.)*

NEW YORK, N. Y.—Bids are asked by William H. Edwards, Comr. of St. Cleaning until noon, Nov. 22, for furnishing all the labor and material required for the removal of snow and ice during winter season of 1910-1911, in the Boroughs of Manhattan, Brooklyn and The Bronx.

GALESBURG, ILL.—Bids were opened on Oct. 28 as follows, by the Board of Public Works for the removal of garbage for one year beginning Jan. 1: William Newhause, $4,000. L. M. Clapp, $4,500.

ST. PAUL, MINN.—The city proposes to construct a garbage disposal plant. L. W. Rundlett is City Engr.

## STREETS AND ROADS.

*(* Denotes that this work is advertised in Engineering News.)*

FALL RIVER, MASS.—The work of laying Hassam pavement on Pine St., between Rock and North Main Sts., and on Second St., between Rodman and Morgan Sts., will start soon. The contract was awarded, some time ago, to the SIMPSON CONSTRUCTION CO., 166 Devonshire St., Boston, at $4,900.

NEW YORK, N. Y.—Bids will be received by the Department of Parks, until 3 p. m., Nov. 17, for furnishing all the labor and materials required for resurfacing with asphalt 23,000 sq. yds. of old walks in Prospect Park, Boro. of Brooklyn. Charles B. Stover is Pres.

NEW YORK, N. Y.—Bids will be received by George Cromwell, Pres. Boro. of Richmond, until noon, Nov. 22, for furnishing all the labor and materials required for constructing curbs and gutters, with either natural or artificial stone, wherever the same are not now paved or are out of repair, in Bay St., from Wave St. to Elizabeth St., in the Second Ward of the Boro. of Richmond, together with all work incidental thereto.

Bids will be received by Alfred E. Steers, Pres. Boro. of Brooklyn, until 11 a. m., Nov. 23, for regulating and paving, with asphalt, on a concrete foundation, the roadways of various streets; also for regulating, grading, curbing, laying sidewalks, etc.

ROCHESTER, N. Y.—The contract for paving Smith St., with Medina block, has been awarded by the Board of Contract and Supply, to H. N. COWLES, at $5,083.

ROME, N. Y.—The lowest bid submitted for repaving West Willett St., between James and Washington Sts., was that of the Warren Bros. Co., 59 Temple Pl., Boston, Mass., at $1.70 a sq. yd.

NEWARK, N. J.—The Board of Public Works has instructed its Chief Engineer to prepare plans for widening Mechanic St., from Broad St., east to and under the Pennsylvania R. R. M. R. Sherrerd is City Engr.

CONNELLSVILLE, PA.—Bids will be received by J. B. Hogg, Boro. Engr., Second National Bank Bldg., Connellsville, until 5 p. m., Nov. 10, for grading, curbing and paving Apple St., between North Pittsburg St. and Mountain Alley. S. P. Hay, is Chn., Street Com.

MONONGAHELA, PA.—The contract for the opening and grading of Jackson St., from Chess St., northwardly to connect with the hill district was awarded recently by the city officials, to JAMES LEAVER, Park Ave.

PHILADELPHIA, PA.—Two bids were submitted on Nov. 1, to William R. Knight, Asst. Dir. of Pub. Wks., for paving sections of 46 streets. The Barber Asphalt Co., was the lower bidder at prices ranging from $1.40 to $1.60 a sq. yd, as compared with bids of $1.55 to $1.75 a sq. yd. bid by the Filbert Paving & Construction Co.

PITTSBURG, PA.—A boulevard is contemplated from Wilkinsburg to Bellevue, which is provided for in a $10,305,000 bond issue recently voted. W. A. Magee is Mayor.

MAUCH CHUNK, PA.—WILLIAM RIEBE, of Tamaqua, has been awarded the contract by the Central R. R. of New Jersey, to build the connection between the Mauch Chunk-Nesquehoning road and the new Broad Mountain road. The link includes two iron bridges and two and a half miles of paved roadway. One of the bridges is to cross the Central R. R. tracks and the other crosses the Nesquehoning Creek. The engineers' estimate is $35,000.

WICK, PA.—The contract for paving five streets in this borough has been awarded to TONY MORELLI.

WILMINGTON, DEL.—The survey for the rebuilding of the Philadelphia and Wilmington turnpike from the Practical Farmer to the Pennsylvania State line, in Brandywine hundred is about finished. Alex. J. Taylor is City Engr. and George H. McGovern is City Clk.

RICHMOND, VA.—The contract for constructing 10,000 yds. of cement sidewalk pavement, has been awarded to the lowest bidder, the COLEMAN CONSTRUCTION CO., of Petersburg, at $1.04 a yd.

GREENVILLE, S. C.—The contract for paving which will require 11,000,000 lbs. of brick, has been awarded to BOWE & PAGE, of Augusta.

MACON, GA.—The contract for paving Third St., between Popular and Plum Sts., and Plum St., between Third and Fourth Sts., has been awarded to the LASLEY CO.

AKRON, OHIO.—A resolution was adopted by the City Council, declaring it necessary to improve Arlington St., from Second Ave. to the south corporation line, by grading and paving. John T. Payne is City Engr.

**ALLIANCE, OHIO.—Bids will be received until Nov. 14, by Charles O. Silver, City Audr., for $54,408 street improvement bonds.**

**EATON, OHIO.—We are officially advised that the following bids were received by the County Commissioners on Nov. 1, for constructing the Eaton and Sugar Valley Road in Preble County: J. E. Minga, Eaton, $10,625; Lawrence D. Wilson, Xenia, $10,723; JENKINS & HINES, Frankfort, Ind., using New Paris stone, $10,500 (awarded contract), and for using Fisher stone, $9,700; Appenzeller, Fishbaugh & Karch, Greenville, $10,865; The A. Wertz Transfer Co. and J. H. Trunck, Hamilton, $10,850.**

**CLEVELAND, OHIO.—We are officially advised that bids were received, on Oct. 29, by the Board of County Commissioners, for grading and improving Ledge Hill on Som** Center Road. The contract has been awarded to C. A. ROZELLE, of Solon, Ohio.

Bids were received on Nov. 2 by the Board of County Commissioners for the change of grade on Broadview Road, Nos. 1 and 4, and the contract was awarded to C. A. WRIGHT, 3856 West 40th St., Cleveland, we are officially advised.

BARNESVILLE, OHIO.—The City Council has adopted a resolution declaring it necessary to improve North Lincoln Ave., from the present terminus of the paved street to Greenmount Cemetery.

CINCINNATI, OHIO.—Bids are asked by the Board of County Comrs., until Nov. 25, for improving Comer Road in Sycamore Township. Fred Dreihs is Clk.

The following bids were received on Oct. 21, by the Board of County Commissioners, to repairing the south fork of Taylor Creek road, from Mack to Dog Trot road: N. Ruebel; Louis A. Martin; H. E. Steele. The estimated cost is $14,039.

GREENVILLE, OHIO.—Bids will be received at the office of the Board of County Commissioners until noon, Nov. 11, fro grading and macadamizing a road 1.5 miles in length, in Neuve and Van Buren Townships under the provisions of the State Highway Law. The cost of the work is estimated at $9,559. J. C. Wonders is State Highway Comr. at Columbus.

POMEROY, OHIO.—The contract for constructing a road .5 mile long in Rutland Township, has been awarded by James C. Wonders, State Highway Comr., Columbus, to GEORGE E. BOWERS, of Middleport, at $4,600.

TOLEDO, OHIO.—We are officially advised that the following bids were received by the Board of County Commissioners, for improving Washington Township road: R. W. Johnson, Tontogany, Ohio, Water-bound macadam $19,000, Bituminous macadam, Carbo-via treatment with limestone base, $23,368, Bituminous macadam, Carbo-via treatment with slag base, $22,900; G. W. Farison, Archbold, Ohio Bituminous macadam, Carbo-via treatment, $23,483; The France Co., Toledo, Water-bound macadam, $15,003; Bituminous macadam, Carbo-via treatment with slag base, $20,868, Bituminous macadam, Carbo-via treatment with stone base, $21,621; The Ohio Paving Co., Toledo, Water-bound macadam, with slag base, $18,000, Water-bound macadam, with stone base, $18,500, Bituminous macadam, Carbo-via treatment with slag base, $21,700, Bituminous macadam, Tarold treatment with slag base, $20,700, Bituminous macadam Carbo-via treatment with stone base, $22,200, Bituminous macadam Tarold treatment with stone base, $21,200; Garrigan Bros., Toledo, Water-bound macadam, $16,880, Bituminous macadam, Carbo-via treatment or Tarvia treatment, $22,200.

The contract was awarded to the FRANCE CO., Toledo, at $21,621, for bituminous macadam, Carbo-via treatment with limestone base, using Waterville stone.

ZANESVILLE, OHIO.—The City Council has decided to pave, grade and curb Greenwood Ave., from Cemetery Ave. to the city limits. H. H. Kennedy is City Audr.

LAPORTE, IND.—Plans are being prepared and bids will soon be asked by the Board of Public Works for the paving of Washington and State Sts. with brick. Ezra Shoecraft is City Engr.

CHICAGO, ILL.—The Board of Local Improvements plans to pave Wabash Ave., from Washington to Congress Sts., with creosoted wooden blocks in place of the present granite blocks. Estimated cost, $48,000.

DULUTH, MINN.—The Park Board contemplates extending the park system having purchased a large tract of land on Lester River, for this purpose. Snively Road is to be extended together with Rogers Boulevard. H. W. Cheadle is City Clk. and O. T. Olson is Supt. Paving.

ST. PAUL, MINN.—The Good Roads Committee of the City Council, Dr. E. H. Whitcomb, Chn. plans the improvement, with macadam and other paving material, the following streets in 1911: Snelling Ave., River Boulevard, Minnehaha St., Jackson St. and Lexington Boulevard. Cost, $35,000.

LINCOLN, NEB.—One bid was received on Oct. 28, by Roscoe C. Ozman, City Clk., for paving in District No. 187. It was that submitted by Abel & Roberts, of Lincoln, at $2.14. Brick will be used.

SIOUX FALLS, S. DAK.—The following bids were received by the City Commissioners on Oct. 25, for grading and draining: Joe Sampson: grading and draining Phillips Ave., from Fifth St. to Riverside Ave; earth excavation, 50 cts. per cu. yd. rock excavation, $5 per cu. yd., Corrugated iron culverts, 18 in., $2 per lin. ft.; Sub-drain, 10 in., $1.90 per lin. ft.; Grading Riverside Ave., Phillips to First Ave. North: 37½ cts per cu. yd.; Grading First Ave. North, from Riverside Ave. to south line of southeast ½ of northwest ¼, Section 9-101-49, 39½ cts. per cu. yd.

I. FANEBUST & SONS: grading and draining Phillips Ave: earth excavation, 48½ cts. per cu. yd; sub-drain, $1.85 per lin. ft.; corrugated iron culverts, $1.80 per lin. ft.; grading Riverside Ave., 39½ cts. per cu. yd.; grading First Ave., 42 cts per cu. yd. (awarded contract).

JEFFERSON CITY, MO.—Bids will be received by the City Council until 4 p. m., Nov. 15, for the grading curbing, macadamizing and Tarvia wearing surface of Dunklin St., from the center of the intersection of Madison and Dunklin Sts. to the center of the intersection of Monroe and Dunklin Sts. E. F. C. Harding, City Engr.

LITTLE ROCK, ARK.—Bids were received on Oct. 25, by the Commissioners of Street Improvement District No. 163, for paving Main St. The contract was awarded to E. J. WETTERSTROM, of the Ayer & Lord Tie Co., 9 Jackson Boulevard, Chicago, Ill. Cost, $50,000.

***AMARILLO, TEX.—Bids will be received by Sam J. Brown, City Secy., until 3 p. m., Nov. 21, for the construction of 80,000 sq. yds. of pavement.**

GALVESTON, TEX.—Bids will be received by John Murch, County Audr., until Nov. 14, for improving the Sea Wall Boulevard, from Ave. H, to east side of 16th St., approximately 9,300 sq yds. concrete sidewalk, 5,400 lin. ft. concrete curb, and 5,400 lin ft. of 10-in. retaining curb.

SAN ANGELO, TEX.—By a majority of 64 votes, a $20,000 bond issue for paving purposes, was carried in this city recently. Address the City Clerk.

BELLINGHAM, WASH.—The contract for the improvement of High St., from Holly to Ellis, with asphalt pavement has been let by the Board of Public Works to C. G. BURNET, at $6,186.

PASCO, WASH.—The contract for constructing sidewalks on Lewis, Fourth and Tacoma Sts., has been awarded to OVERTON BROS., of Corvalis, Ore., by L. D. Conrad, City Clk.

LINNTON, ORE.—See item under Light and Power Plants.

BRAWLEY, CAL.—The Board of City Trustees has ordered the construction of cement sidewalks on the following Sts: E St., G St., Eighth St., Plaza, Sixth St., and Imperial Ave. W. H. Whilan is City Clk.

LOS ANGELES, CAL.—The Board of Public Works has awarded the contract for improving Arlington St., from Adams to Jefferson, to L. H. McGOWAN, at 9 cts. a sq. ft.; for macadam paving, 35 cts. a lin. ft.; for cement curb, 15 cts. a sq. ft.; for cement gutter, 30 cts. a sq. ft.; for vitrified gutter. Aggregate cost, $11,290.

TORONTO, CAN.—Eee item under Bridges.

HUNTINGTON BEACH, CAL.—The Board of Trustees has ordered the improvement of the following streets: Alabama Ave., Acacia Ave., Magnolia Ave., by grading and paving. C. E. Levering, is City Clk.

OAKLAND, CAL.—The contract for paving Broadway, between the Country Club and Ocean View Drive, has been awarded to the BLACK & BILGER CO., by the City Council.

RIVERSIDE, CAL.—The SHULL-TUCKER CO. has been awarded contract, at $9,790, for improving Pepper St., requiring 4,530 lin. ft. of cement curb, at 32 cts., 13,114 sq. ft. of concrete gutter, at 16.5 cts., 176 lin. ft. culverts, at $2; 69,356 sq. ft. of macadam roadway, at 8.2 cts. a sq. ft.; 884 sq. ft. of alley concrete, at 15.5 cts. a sq. ft.

SACRAMENTO, CAL.—The contract for constructing two miles of street in Maple Park division, has been awarded by Wood & Tatum, to the PIEDMONT CONSTRUCTION CO., of Oakland. Cost, $90,000.

STOCKTON, CAL.—Plans have been outlined by the San Joaquin Highway Commission for a boulevard from a point just inside of the western city limits along the wide levee on the south side of Stockton channel, over the dam built across Mormon channel and west along the south side of that stream back to Stockton channel, and thence to the San Joaquin river. R. C. Tumulty is City Engr.

COLEMAN, ONT.—The Township plans to expend over $41,000 on roadways throughout the municipality, next year, it is stated.

VANCOUVER, B. C.—Recommendations of N. A. Clement, the City Engr., provide for street improvements, to cost $264,600.

## MANUFACTURING PLANTS.

(* *Denotes that this work is advertised in Engineering News.*)

CLINTON, MASS.—Draper Bros. have had plans and specifications prepared by F. W. Dean, Engr., 70 State St., Boston, for an addition to their plant at Clinton. The proposed building is of standard slow burning mill construction, 100 × 65 ft., two stories. It will be used for manufacturing purposes. The plans are ready for estimating and prospective bidders should communicate with F. W. Dean.

BOSTON, MASS.—Bids will be received soon by the Fire Department for the construction of a repair shop, to replace the one recently destroyed by fire. Estimated cost, $100,000.

SOUTHBRIDGE, MASS.—The Litchfield Shuttle Co. is said to be contemplating the erection of a plant near the present shuttle shop in Shuttleville.

SOUTH MANCHESTER, CONN.—Cheney Bros. Inc., have awarded the contract for the construction of a weaving mill at Pine and Cooper Sts., to L. P. SOULE & SON CO., 166 Devonshire St., Boston, Mass. This building will be of brick construction, 100 × 425 ft. The heating plant will be installed by STUART W. CRAMER CO., of Providence, R. I.

NEW YORK, N. Y.—The Taconic Knitting Co. has been incorporated, with a capital stock of $25,000. The incorporators are: Theodore Strassner, of this city; Charles N. Mix, of Brooklyn, and Eli Mix, of New Haven, Conn.

BUFFALO, N. Y.—The John Strootman Shoe Co., 65 Carroll St., has awarded the following contracts for erection of their proposed factory at Monroe and Jefferson Sts. It will be 60 × 160 ft., 3 stories and basement, and will cost $40,000: GEORGE KEMPF'S SONS, 99 Locust St., masonry; E. M. HAGER & SONS CO., 141 Elm St., carpentry. Robert J. Reidpath & Son, Builders' Exchange, are the Archs.

Robert J. Reidpath & Son, Builders' Exchange, have completed plans for a foundry building, 75 × 120 ft., of brick and steel, one story high, to be erected by the Crosby Co., manufacturers of stamped sheet metal work, at Pratt and Williams Sts. William H. Crosby is Pres., 183 Pratt St.

SYRACUSE, N. Y.—The Reddin Iron Works have let a contract for construction of an addition of brick to its foundry plant on Marcellus St., to HUBER BROS., this city, from plans of E. A. Howard, Arch., Bastable Bldg.

NEWBURGH, N. Y.—The Hillside Chemical Co., of Newburgh, has awarded to NELSON & PERROTT the contract for the masonry, and to WILLIAM H. THORN, the carpentry contract, for a 2-story brick addition, 100 × 52.5 ft., to its plant at Johnes and Renwick Sts.

POTSDAM, N. Y.—The Potsdam Clothing Co. will probably rebuild its factory, almost completely burned, causing a loss of $35,000, it is stated.

TROY, N. Y.—The Rensselaer Valve Co., of Troy, formed to take over the business of the Rensselaer Mfg. Co., has been incorporated with a capital of $500,000, and will enlarge the plant of the old concern. The incorporators are: Thomas Breslin and Irving A. Rowe, of Troy.

JERSEY CITY, N. J.—The general contract for an embroidery factory to be built in North Bergen for Silver & Co., of 40 West 13th St., New York, has been awarded to the GRAMPION REALTY CO., 182 St. Nicholas Ave., New York. It will be of brick, two stories high, 50 × 128 ft. The cost will be about $19,000.

We are officially advised that the GUARANTEE CONSTRUCTION CO., 140 Cedar St., New York, has been awarded the contract for the erection of a 2-story factory building, 209 × 204 ft., on West Side Ave., West Bergen, opposite Audubon Ave. It will be constructed of brick. The Mutual Chemical Co., 92 William St., New York, is the owner.

BELLEFONTE, PA.—An ice manufacturing plant, the capacity to be upward from ten tons every 24 hours, is to be erected here. George Doll is interested.

MONESSEN, PA.—The Pittsburg Steel Co., Fourth Ave., Pittsburg, plans to make extensive additions and improvements to their plant in Monessen, on the Monongahela River. An appropriation of $5,000,000 has been authorized for this purpose.

BALTIMORE, MD.—Plans are being prepared by T. Wells Pietsch, Arch., American Bldg., for a box factory to take place of the one which was recently burned, of Becker Bros., at Lexington and Frederick Sts. It will be a 4-story structure, of brick, with a slag roof, steam heat, etc. The cost will be about $100,000.

Bids will be received by Otto G. Simonson, Arch., American Bldg., for the proposed addition to the factory building at Preston and Patuxent Sts., for the Simpson-Doeller Co. The building will be of reinforced concrete and will have a slag roof, steam heat, gas and electric lighting, plumbing, etc. ost, $100,000. Noted on Oct. 13.

BALTIMORE, MD.—John Freund, Jr., Arch., 210 East Lexington St., has announced that he has finished the plans and specifications for the proposed bakery building, to be erected at 310-320 North Gay St. for the City Baking Co., 500 Equitable Bldg. The owners will soon receive bids. It will be of brick and will have a slag roof, steam heat, gas and electric lighting, plumbing, etc.

WASHINGTON, D. C.—A warehouse and manufacturing plant, to cost about $75,000, is to be erected at First and L Sts., Northeast, by Swift & Co., 12 Centre Market, it is stated.

CHAPMANVILLE, W. VA.—See item under Light and Power.

HUNTINGTON, W. VA.—The United Woolen Mills Co., of Parkersburg, was granted a building permit by the City Commissioners on Nov. 2, for the erection of a 3-story factory in this city. W. A. Hirsch, Parkersburg, is Pres.

NEW CUMBERLAND, W. VA.—The contract for laying the brick on the building which is to replace the recently burned Davis-Price Foundry & Machine Shope, has been awarded to WARD & McCONKEY, of this city. The structure will be 110 × 120 ft., and will be equipped with over $50,000 worth of new machinery.

WHEELING, W. VA.—The Wheeling Mold & Foundry Co. has taken out a building permit for the erection of a $20,000 storage building at their Peninsula plant.

WHEELING, W. VA.—The Hazel-Atlas Glass Co. has let the contract for the erection of their 4-story factory building to W. H. FAIR, of this city. The structure will be 45 × 120 ft., and of steel, brick and wood construction, of the slow-burning type. It will cost $30,000 complete. The structural iron work and lighting has been sub-let to the H. P. MOSS IRON WORKS, at $3,600; and the brick work will be done by J. R. BUTTS.

KINGS MOUNTAIN, N. C.—The Sevier Cotton Mills Co. has been incorporated with a capital stock of $100,000, and will take over the John Mfg. Co. This mill has 5,000 ring and 2,000 twister spindles. The officers of the new company are: Lawrence S. Holt, of Burlington, N. C., Pres.; W. E. Holt, Lexington, N. C., Vice-Pres.; R. Le Tate, of Charlotte, N. C., Secy.-Treas..

SALISBURY, N. C.—The Vance Cotton Mills Co. is having plans made for the enlargement of its plant. The capital stock has been increased from $100,000 to $300,000 for this purpose.

FLORENCE, S. C.—A fertilizer factory is to be erected here. The following, all of Florence, are interested: J. F. Stackley, Eugene F. Douglas, Henry S. Rose, J. Willard Ragsdale and Joseph W. McCown. A company will be formed with a capital stock of $50,000.

LA GRANGE, GA.—The Dunson Mills of La Grange, will be chartered with a capital stock of $250,000, to build a cotton mill. J. E. Dunson, W. S. Dunson, Supt. of the Dixie Cotton Mills of La Grange, and J. M. Bernard are among the incorporators.

SANFORD, FLA.—The contract for erecting a fertilizer factory here, we are officially advised, for the Virginia Carolina Chemical Co., has been awarded to E. W. PARKER, of Tampa. Noted on Oct. 27.

NEW ORLENAS, LA.—A charter for the Lane Cotton Mills, with an authorized capital stock of $900,000, has been filed. S. Odenheimer, it is understood, will be President and Gen. Mgr.

C. W. Elrod and J. F. Bashars, of Dallas, Tex., have established offices here, where they plan the organization of a company to build a mill for manufacturing an artificial silk from the fiber of the zapupe plant of Mexico. They are connected with a land company that owns large tracts of land in Mexico, where it is proposed to cultivate the plant.

Plans have been completed by George F. Hammond, Arch., 734 Euclid Ave., Cleveland, for the erection of a 3-story factory, 100 × 100 ft., for the American Chiclet Co., near Carrollton Ave. It will be constructed of brick and cement and will be fireproof. W. H. Keighley is Mgr.

NEW ORLEANS, LA.—We are officially advised that JAMES STEWART & CO., 30 Church St., New York, have been awarded the contract to build a 5-story factory for the Orleans Mfg. Co., at New Orleans. The plans were prepared by De Buys, Churchill & Labouisse, Archs., Hibernia Bank Bldg., New Orleans. Cost, $95,000.

AKRON, OHIO.—The Northern Ohio Traction & Light Co. is planning the erection of extensive barns at Akron and a site is now being sought for their location. Charles Currie is Gen. Mgr., at Akron.

DAYTON, OHIO.—The Ohio Canners' Association plans to establish a branch factory here. The Chamber of Commerce is interested.

LIMA, OHIO.—The contract for erecting a 3-story and basement factory, 50 × 100 ft., for the Lima Mattress Co., has been awarded to SMITH & SHERRICK. The structure will be on North Main St., and will be fireproof, of reinforced concrete frame and the exterior of brick. Cost, $30,000.

EAST UNION (Orrville post-office), OHIO.—A company has been organized here for the purpose of constructing a plant for the manufacture of bone fertilizer. It will be 50 × 100 ft. The officers of the new company are: Daniel Miller, Pres. and Supt.; Christian Hamlin, Secy. and Traveling Salesman; Charles Jentes, Treas. The Board of Directors consists of Charles Krick, C. E. Carson, H. Stauffer and L. Daniels.

VINCENNES, IND.—William White, Pres. of the Bell Smokeless Powder Co., of St. Paul, Ind.. announces that he will build and equip a plant near Vincennes, to manufacture powder. Bids will be received soon.

DETROIT, MICH.—Varney, Winter & Varney, Equity Bldg., have let the following contracts for the proposed brass factory for McRae, Roberts Co., 227 Campbell Ave. The main building will be three stories, 60 × 191 ft. The foundry, of steel construction, will be one story, 60 × 139 ft. The buildings are to be connected to present plant by three bridges, 25 × 12 ft. Masonry, to GEORGE VIVIER & SON, 479 Forest Ave.; carpentry, to J. A. H. HABERKORN, 380 Fourth Ave. The cost of the plant will be $50,000. The architects are preparing plans for steam heating, and will receive estimates soon.

DETROIT, MICH.—Donaldson & Meier, Archs., and Ammerman, McColl & Anderson, Engrs., Penobscot Bldg., will be ready for estimates soon on a 7-story addition, 80 × 100 ft., to the Pingree Shoe factory, S. L. Depew, Secy., 102 Jefferson Ave. The building is to be constructed of brick and stone, structural iron, with a fan system for ventilation, steam heat. Cost, $100,000.

Charles Sterling, 508 Commerce St., Milwaukee, Wis., has let the general contract to JACKSON & MAURICE, Hart and Charlevoix Sts., Detroit, for a tannery plant for Armstrong & Graham, 128 Jefferson Ave., Detroit. The buildings will be of brick, steel and concrete, and will be three stories, 45 × 105 ft.; two stories, 43 × 160 ft.; also a 1-story shed, 27 × 54 ft. The owners are receiving estimates on steam heating. The cost of the buildings will be $40,000.

DETROIT, MICH.—The Auto Parts Mfg. Co., A. O. Dunk, Mgr., Antoine St. and the Michigan Central R. R., is contemplating a manufacturing building, one story high, 75 × 180 ft. The structure is to be located at Holbrook Ave. and the Grand Trunk R. R.

GRAND RAPIDS, MICH.—J. J. Wornette, Engr., 441 Houseman Block, is preparing plans for a boiler house for the Wagenmaker Furniture Co., C. E. Mosher, Secy., South Market St. and Godfrey Ave. The owners will let all contracts.

Pierre Lindhout, Ashton Bldg., will let the general contract in the early spring for the 4-story and basement addition to the plant or the Imperial Furniture Co. Cost, $40,000.

CHICAGO, ILL.—We are officially advised that the general contract for erecting a 6-story and basement warehouse, 80 × 160 ft., of brick mill construction, has been awarded to A. LUND, 188 Madison St., at $65,750. The J. L. Metz Furniture Co. is the owner. Alfred S. Alschuler, 39 Jackson Boulevard, is the Arch. Noted on Oct. 13.

MILWAUKEE, WIS.—We are officially advised that the Wetmore Adding Machine Co., Merrill Bldg., recently incorporated, as noted on Oct. 27, will rent factory space and not erect a building. The company will be in the market for factory equipment in a few months. F. W. Van Ness is Secy.-Treas.

ST. PAUL, MINN.—The St. Paul Business League is endeavoring to secure a location for a plant for a knitting company in that city which is capitalized at about $200,000. About 250 operatives will be employed at the proposed plant.

SEATTLE, WASH.—George C. Dietrich, Globe Bldg., has completed plans for the alteration of the Seattle Empire Laundry building at the southwest corner of Fourth Ave. and Pine St. The alteration will consist of shortening the Fourth Ave. side of the building, 12 ft. and 7 ft. on the Pine St. side. The structure is now 60 × 120 ft., owned by D. C. Keeney. The alterations will cost about $15,000. Mr. Dietrich is now receiving bids on the work.

SPOKANE, WASH.—The Jones-MacIntyre Candy Co. has been organized for the purpose of erecting a 2-story factory. The Merchants & Manufacturers Investment Co. will construct the building. L. P. Jones is one of the incorporators.

The Lucky Leaf Creamery Co. plans to make extensive improvements to its factory in Spokane. A. E. Pynch and [illegible] Thompson, both of 308 Monroe St., a[illegible] the incorporators.

PORTLAND, ORE.—F. A. Ne[illegible] the inventor of the automatic street [illegible] fender, is planning to construct a factory [illegible] to manufacture his new product.

ONTARIO, ORE.—A planing m[illegible] sash and door factory is to be erected by Murray & Greyerbiehl, of Boise, I[illegible] Property on Idaho Ave. was recent[illegible] purchased for this purpose.

LOS ANGELES, CAL.—Work w[illegible] be commenced soon on the erection of [illegible] plant for the Pacific Tank, the Pacific [illegible]ng Mill and the National Wood Pipe Companies at Santa Fe Ave. and 43d St., according to an announcement made recently by [illegible]liam J. Hampton, Pres. of the three companies. The proposed plant is to cost in the neighborhood of $250,000 and will be built on [illegible] 28-acre tract which was recently purchased from the Huntington Land & Improvement Co. and S. J. Smith for $100,000.

RIVERSIDE, CAL.—The Riverside Portland Cement Co. has had plans prepared for the enlargement of their plant at [illegible]tmore. It will be of reinforced concrete construction. Four new kilns, eight ball mills, ten tube mills and $300,000 worth of new machinery will be installed. The complete cost of the improvements will be $400,000.

SAN PEDRO, CAL.—A steel plant with a 10,000-ton capacity is contemplated here by L. S. Barnes, Central Bldg., Los Angeles, at an estimated cost of $10,000,000.

CLIFFS, ARIZ.—The Greenlaw Mill, recently destroyed by fire, is to be rebuilt, according to T. A. Riordan, Pres. The loss is estimated at $90,000.

PRESCOTT, ARIZ.—A cyanide plant is to be installed at the properties of the Federal Mining Co., in Cherry Creek District.

ST. JOHN, N. B.—The Atlantic Sugar Refining Co. is reported to have completed plans for the establishment of their refinery here, which, when completed, will employ 500 men.

SHERBROOKE, QUE.—The Guelph Carpet Co., of Guelph, Ont., has purchased the plant of the Montreal Carpet Co. here. The plant will be largely increased.

THREE RIVERS, QUE.—J. N. Greenshields, R. Forget, of Montreal, and C. R. Whitehead, of Three Rivers, have organized the Wayagainack Pulp & Paper Co., which will erect a plant at Three Rivers, having a daily output of 100 tons. It is stated that $3,000,000 of bonds have been underwritten.

GUELPH, ONT.—The Robert Stewart Co., Ltd., intend erecting a new planing mill on Cardigan St.

HARRISON, ONT.—The bylaw granting a free site and buildings to the Canadian New Shoe Co. was practically unanimously carried on Oct. 24. Operations will shortly be started and 75 hands employed, it is reported.

REGINA, SASK.—Armour & Co. will erect an abbatoir here this fall. The company is capitalized at $500,000. Address Hugh Armour, of Regina.

VANCOUVER, B. C.—Lincoln Chandler, Secy. of the Amalgamated Railway, Carriage & Wagon Co., and connected with the British Empire Bridge Works, of Birmingham, England, is in Vancouver, in connection with the establishement of engineering construction works, upon which, at least, $5,000,000 will be expended. Construction of the plant will be commenced shortly and the works will cover between 50 and 100 acres.

EL CHICO, MEX.—Compania Beneficiadora de Metales of Atotonilco el Chico, S. A., has been organized and it is proposed to at once install a mill and cyanide plant at El Chico in Pachuca District, of 100-ton capacity per day.

## MISCELLANEOUS CONTRACTS.

(* *Denotes that this work is advertised in Engineering News.*)

U. S. RECLAMATION SERVICE.—All news concerning canal and irrigation projects, etc., will be found under Water Supply—Irrigation.

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TOWBOATS.—Boston, Mass.—Bids will be received by the Metropolitan Park Commission, 14 Beacon St., Boston, until noon, Nov. 14, for furnishing towboats to be used in breaking ice in the channels of the Charles River basin. John R. Rablin is Engr.

DREDGING.—Boston, Mass.—Bids are asked by the Board of Harbor and Land Commissioners, State House, Boston, until 2 p. m., Nov. 18, for dredging anchorage basin and channel in Lobster Cove, at Annisquam, in the city of Gloucester. The work to be done is the dredging of about 80,000 cu. yds. of material to make an anchorage basin and entrance channel 6 ft. deep at mean low water. The excavated material is to be dumped at sea; also for dredging 120,000 cu. yds. at South Boston. John R. Rablin is Engr.

FILLING, ETC.—Boston, Mass.—The contract for filling, slope paving and fence on Freeport St. has been awarded by the city to JAMES DOHERTY, 33 Calumet St., Boston.

*DREDGING.—Boston, Mass.—The BAY STATE DREDGING CO., 185 Summer St., Boston, has secured the contract for dredging in Lynn Harbor, at 21.4 cts. per cu. yd., and $10 each for removing boulders. Bidders noted on Oct. 27.

RUBBLESTONE.—Boston, Mass.—The following bids were opened on Oct. 31 by Col. Frederic V. Abbot, Corps Engrs., U. S. A., Boston, for rubblestone in north jetty, Newburyport Harbor, Mass., price given per ton of 2,000 lbs.: Rowe Bros. Co., Richmond, Me., $1.26; Breakwater Co., Philadelphia, Pa., $1.19; P. H. Doyen Co., Portland, Me., $1.18; Rockport Granite Co., Rockport, Mass., $1.05.

FIRE ESCAPES.—New York, N. Y.—Bids will be received by C. B. J. Snyder, Supt. School Buildings, New York, until Nov. 14, for constructing fire escapes at School 52 Richmond Hill, Borough of Queens.

MISCELLANEOUS SUPPLIES.—New York, N. Y.—Sealed bids will be received by the Commissioner of Docks until noon, Nov. 16, for Contract No. 1241, for furnishing all the labor and materials required for furnishing and delivering miscellaneous supplies.

REPAIRING FERRY STRUCTURES.—New York, N. Y.—Bids will be received by Calvin Tompkins, Comr. of Docks, until noon, Nov. 18, for Contract No. 1230, Class 2, for furnishing all the labor and materials required for reconstructing and repairing the ferry structures at the foot of Broadway, East River, [illegible] Brooklyn.

TAR KETTLES, ETC.—New York, N. Y.—Bids will be received by George McAneny, Pres. Bor. Manhattan, until 2 p. m., Nov. 16, for furnishing and delivering eighteen (18) combination tar kettles and gravel heaters.

REPAIRS TO FERRYBOAT.—New York, N. Y.—Bids will be received by Calvin Tompkins, Comr. of Docks, until noon, Nov. 15, for Contract No. 1253, for furnishing all the labor and materials required for repairs to the municipal ferryboat "Brooklyn."

AVIARY, ETC.—New York, N. Y.—Bids were received on Nov. 3 by the Park Board for all labor and materials for the construction of an aviary and winter house for eagles and vultures in the New York Zoological Park, Bronx Park, Bor. The Bronx. The lowest bidder was George Hildebrand, 38 Park Row, New York.

ROAD ROLLER.—New York, N. Y.—Bids or estimates will be received by the Park Board until 3 p. m., Nov. 17, for furnishing and delivering one 15-ton steam road roller.

BROKEN STONE.—New York, N. Y.—Bids will be received by the President of the Borough of Richmond until noon, Nov. 15, for furnishing and delivering broken stone.

•DREDGING, ROCK REMOVAL.—New York, N. Y.—Bids are asked, until Dec. 2, by Col. W. M. Black, Corps Engrs., U. S. A., Room 710, Army Bldg., New York, for dredging and rock removal in the Hudson River, N. Y.

BEACH IMPROVEMENTS.—Asbury Park, N. J.—The citizens, on Nov. 1, voted to issue $150,000 of bonds for beach front improvements, including new hot and cold sea-water bathing establishment, a swimming pool, additional pavilions and repairs to the boardwalk.

•CONCRETE MONUMENTS.—Ventnor City, N. J.—Bids for furnishing and placing concrete monuments were received by the Common Council on Nov. 2. Contract has been awarded to the **ATLANTIC EXCAVATING CO.**, 2320 Atlantic Ave., Atlantic City. W. I. Risley is City Engr.

RETAINING WALL.—Lambertville, N. J.—The contract for erecting a retaining wall along a portion of the county road has been awarded to **TREFTZ & BAILEY.**

DAM.—Homer City, Pa.—The Rochester & Pittsburg Coal & Iron Co., it is reported, will build a large dam near here.

ICE-HOUSE.—Cardington, Pa.—The **POMEROY CONSTRUCTION CO.**, 1609 Ranstead St., Philadelphia, has been awarded the contract for an ice storage house to be built for the Western Ice Mfg. Co., Cardington. Estimated cost, $7,000.

ICE PLANT.—Bellefonte, Pa.—Plans have been completed for the construction of a 10-ton ice plant here. Address George Doll.

DREDGING.—Wilmington, Del.—Bids will be received by Maj. R. R. Raymond, Corps Engrs., U. S. A., until Dec. 5, for dredging Maurice River, N. J.

STEEL CAISSONS.—Washington, D. C.—Bids are asked by the Bureau of Yards and Docks, Navy Dept., Washington, until 11 a. m., Dec. 22, for furnishing three steel caissons for dry docks at the navy yards, New York, Brevert and Washington; and naval stations, Pearl Harbor, Hawaii. R. C. Hollyday is Ch. Bureau.

PUMPS, MOTORS, ETC.—Washington, D. C.—The Bureau of Yards and Docks, Navy Dept., Washington, D. C., has awarded to the **JOHN W. DANFORTH CO.**, Buffalo, N. Y., the contract for furnishing and installing pumping stations, including pumps, motors and other apparatus, with pipe lines for pumping oil from large storage tanks to the Government wharves at four naval stations located at Bradford, R. I.; Norfolk, Va.; Charleston, S. C., and Key West, Fla., at about $85,000. The steam and power pumps and the electrical apparatus for this work, it is stated, are to be furnished by the International Steam Pump Co. and the General Electric Co., through their Buffalo offices.

ARMOR.—Washington, D. C.—Bids are asked by the Navy Department, Washington, until noon, Dec. 1, for furnishing armor for naval vessels. N. E. Mason is Ch. Bureau of Ordnance.

TORPEDO BOAT DESTROYERS.—Washington, D. C.—Bids were received as follows on Nov. 8, by the Secretary of the Navy, Washington, for five 742-ton torpedo boat destroyers, Nos. 37 to 42, under three classes: (1) government design, hull and machinery; (2) government design, hull and and machinery, with speed reduction gearing fitted between cruising and low-pressure turbines; (3) government design, hull and equipment with bidder's design machinery. All bidders bid on vessels of a speed of 29½ knots, to be completed in 24 months each, except where it is otherwise stated: Fore River Ship Building Co., Quincy, Mass., (3) one, $648,700, with 63-in., 18-stage Curtis reversible marine turbines. Bath Iron Works, Bath, Me., (1) one, $669,750, two, $654,500, speed 30 knots; (3) one, $655,500; two, $630,500. New York Ship Building Co., Camden, N. J., (1) one, $645,000, reduction of $5,000 if tried over Delaware breakwater course. Union Iron Works, San Francisco, Cal., (1) one, $721,000; two, $704,000; (2) same prices. Maryland Steel Co., Sparrow's Point, Md., (1) two, $685,000; (3) two, 742,000. Newport News Shipbuilding & Dry Dock Co., Newport News, Va., (1) one, $635,000, deduction of $4,500 if tried in Delaware Bay. William Cramp & Sons Ship & Engine Building Co., Philadelphia, Pa., (1) one, $658,800, deduction of $4,800 if tried in Delaware Bay.

•BRACKETS, ETC.—Norfolk, Va.—Bids were received by Col. Mason M. Patrick, Corps Engrs., U. S. A., on Nov. 1, for c.-i. brackets, gear wheels, steel shafting, etc., for devices for transmission of range data at various batteries. The lowest bid submitted was that of the Steacy-Schmidt Mfg. Co., York, Pa., at $4,350.

•WHARF.—Richmond, Va.—Bids will be received by the James River Improvement Committee until 4 p. m., Dec. 2, for specifications, plans and detail drawings for building a reinforced-concrete bulkhead wharf on James River at Richmond. Charles E. Bolling is City Engr.

CONCRETE DRAIN.—Norfolk, Va.—The Board of Control have opened bids for the construction of a concrete drain along the bed of Tarrant Creek near Westover and Graydon Aves., as follows: F. J. McGuire, $6.25 per running ft.; **LOUIS LAWSON**, $6.10 (awarded contract).

STEEL SHED.—Charleston, S. C.—Bids were received as follows on Nov. 5, by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for the construction of a steel storage shed at the Charleston navy yard: Brent Winkins, 23½ Whitehall St., Atlanta, Ga., $13,884; Snare & Triest Co., 143 Liberty St., New York, $13,924; Keepdry Construction Co., 162 West 27th St., New York, $13,950; Baltimore Bridge Co., Baltimore, Md., $14,480; Guarantee Construction Co., 140 Cedar St., New York, $15,250; Lauer & Harper Co., Baltimore, $14,280; Charleston Engineering & Contracting Co., 54½ Broad St., Charleston, S. C., $13,825; Simons-Mayrant Co., Charleston, $13,694; Penn Bridge Co., Beaver Falls, Pa., $13,995; New Jersey Foundry & Machine Co., 90 West St., New York, $14,195.

•DREDGING.—Savannah, Ga.—Bids were received as follows, on Oct. 27, by Col. Dan C. Kingman, Corps Engrs., U. S. A., for dredging in Brunswick Harbor, Ga., 60,000 yds. The only bidder was P. Sanford Ross, Inc., Jersey City, N. J., at 17.79 cts. per cu. yd., or $10,674. This bid was recommended for rejection as excessive.

Bids were received, same date, as follows for dredging 150,000 cu. yds. in waterway between Savannah and Fernandina, Fla., harbor at Darien, Ga., and Sapelo Harbor, Ga.: Simons-Maryant Co., Charleston, S. C., $25,350; Savannah Dredging Co., Savannah, $31,500; P. Sanford Ross, Inc., Jersey City, N. J., $26,000 (recommended for acceptance). The lowest bidder could not begin work for some time.

REMOVAL OF WRECK.—Jacksonville, Fla.—Bids will be received by Capt. George R. Spalding, Corps Engrs., U. S. A., until noon, Nov. 21, for removal of wreck "Chatham," at entrance of St. John's River.

KEY WEST, FLA.—Bids are asked by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., until 11 a. m., Dec. 10, for constructing a quay wall at the naval station, Key West.

SHED, TRACK AND TRESTLE.—Fort Morgan, Ala.—Bids were received by Lieut. Edwin F. Barlow, Constr. Q. M., U. S. A., on Oct. 28, for the construction of a coal shed, railroad track and trestle. Recommendation has been made that W. C. Pease, Atlanta, Ga., be awarded contract.

LEVEE WORK.—Vicksburg, Miss.—Bids for about 183,000 cu. yds. of levee enlargement in the Lower Yazoo Levee District, Miss., 400 miles below Cairo, were received as follows by the Mississippi River Commission, Third District, Vicksburg, on Oct. 26: (a) Stations 1717-1910, 93,000 cu. yds.; (b) Station 1810-1900, 90,000 cu. yds.: Israel R. Bobbitt, Point Pleasant, La., (a) 15⅝ cts., (b) 16⅝ cts.; Dulaney & Foote, Grace, Miss., (a) 16 cts., (b) 19.4 cts.; R. T. Clark, Natchez, Miss., (a) 18 cts., (b) 18 cts. (for all or none); John Mystrom, Greenville, Miss., (a) 17.19 cts., (b) 18.19 cts.; Roach & Stansell, Memphis, Tenn., (a) 16.94 cts., (b) 19.94 cts. (for all or none); O. A. Gibson, Natchez, (a) 15.5 cts., (b) 17 cts.; H. F. Garbish, Vicksburg, (a) 19.35 cts., (b) 19.2 cts.; Martin Jennings, Memphis, (a) 16 cts., (b) 18.4 cts.; Helgason Bros., Vicksburg, (a) 14.4 cts., (b) 14.4 cts. (for all or none); Lowrance Bros., Rosedale, Miss., (a) 14.2 cts., (b) 15.4 cts.; R. L. Leonard, Memphis, (a) 16.75 cts., (b) 16.75 cts. (for all or none).

EARTHWORK.—New Orleans, La.—Bids were received as follows, on Oct. 31, for 36,000 cu. yds. of earthwork, La Fourche Levee District: T. M. Sullivan, Marganez, Ala., 17.89 cts.; Hampton Reynolds, New Orleans, La., 21.4 cts.; A. E. Pasher, Vicksburg, 16.9 cts.; R. T. Clark, Natchez, Miss., 15.7 cts. in 4½ mos.; W. L. Lusman, Baton Rouge, La., 17.89 cts.; Israel R. Bobbitt, Point Pleasant, La., 17⅞ cts. in 1.8 mos. (recommended for award).

LEVEE WORK.—Shreveport, La.—Bids were received on Nov. 1 by the Board of Commissioners of Caddo Levee District, Shreveport, for levee work in Caddo Parish, on the Red River right bank, Upper Rush Point Levee, Beard Levee and Robson Levee, approximately 35,000, 12,000 and 30,000 cu. yds., respectively. Contracts have been awarded as follows: Upper Rush Point Levee, to **W. G. BURT**, Benton, La., at $11.60 per cu. yd.; Beards Levee, to **V. V. HUNT**, Shreveport, at $11.80; Robson Levee, to **GEORGE EPPLES**, Shreveport, at $11.88. S. N. Kerbey is Secy.

DRAINAGE CANAL.—New Iberia, La.—The contract for completing a drainage canal near here has been awarded to **ALBERT G. THOMAS**, New Orleans, La.

LODGE, WALL, ETC.—Pittsburg Landing, Tenn.—Bids will be received until 11 a. m., Nov. 21, by Major G. G. Bailwy, Chief Q. M., U. S. A., Department of Gulf, Chandler Bldg., Atlanta, Ga., for the construction of superintendent's lodge, outbuildings, roadway, sidewalk, inclosing wall, entrance gate, rostrum sewer and water supply, at Shiloh National Cemetery, Pittsburg Landing

EXTENDING JETTY.—Cleveland, Ohio.—Bids will be received until Nov. 21 by Col. John Millis, Corps Engrs., U. S. A., Federal Bldg., Cleveland, for extending stone jetty at Sandusky Harbor.

•REMOVING ROCK LEDGE.—Cincinnati, Ohio.—Bids will be received by Maj. John C. Oakes, Corps Engrs., U. S. A., Cincinnati, until noon, Dec. 9, for removing rock ledge at Dam No. 11, Kentucky River, Ky., near College Hill, Ky.

CULVERT.—Steubenville, Ohio.—The Pittsburg, Cincinnati, Chicago & St. Louis Ry. Co. will widen the "dump" culvert. This includes straightening one of the city streets. Plans are now being prepared. John N. Leach is City Engr.

MAUSOLEUM.—Port Clinton, Ohio.—Plans have been perfected for the erection of a mausoleum in Lakeview Cemetery here. The structure will contain 150 crypts, will be built of granite and the interior lined with marble and will contain a chapel. The building is to be erected by the **AMERICAN MAUSOLEUM CO.**, Clyde, Ohio, as soon as the required number of crypts have been sold.

DOCKS.—Cleveland, Ohio.—Docks to cost $300,000 will be built by the Erie R. R. along the Cuyahoga River at the Center St. bridge under a permit granted on Oct. 28. A coal dumping battery is included in the plans. H. O. Dunkle is Gen. Supt., Cleveland.

GRANDSTAND, ETC.—Cleveland, Ohio.—Bids were received by the Board of Education on Oct. 31, for the erection of a grandstand for the West Technical School. All bids were rejected as excessive.

DITCH.—Terre Haute, Ind.—Bids will be received by P. S. Mace, Engr., 600 North Water St., for the construction of the Anthony Fretz et al. open ditch in Harrison Township, Clay County.

ELEVATOR.—LaFayete, Ind.—The Schnable Grain Co., Shadeland, four miles south of this city, will receive bids for the erection of a new elevator on the site of the building recently burned.

DAM.—Madison, Ind.—U. S. Engineers are making surveys and taking soundings for the location of dam No. 40, two miles above here. Estimated cost, $1,500,000.

TIMBER DOCK.—Michigan City, Ind.—Bids will be received until Nov. 22 for the construction of about 800 lin. ft. of timber dock. H. M. Miles is City Engr.

STRAIGHTENING RIVER.—English, Ind.,—The citizens are considering plans to straighten a branch of Blue River and remove the obstruction in the river below the town in order to avoid the recurring freshets and overflow.

TILE.—Shelbyville, Ind.—Bids will be received until 10 a. m., Nov. 19, by Commissioners of Shelby County, Shelbyville, for furnishing 18-in. tile. G. B. Huntington is County Audr.

DRAIN.—Ottawa, Ill.—**EGAN & EENTORF**, Amboy, Ill., have secured the contract for about five miles of tile drain in Drainage District No. 1, Freedom Township, at about $17,000.

DRAINAGE.—Canton, Ill.—The Drainage Commissioners have awarded contract for constructing five retaining walls for Subdistricts Nos. 2, 3, 4, 5 and 6, bids opened on Oct. 22, to **HOLMAN S. WALTER**, Cisco, for tile, etc., at $8,658.

DITCH.—Dahlgren, Ill.—Bids will be received about Nov. 20 for the drainage ditch to be constructed in Hamilton County under the supervision of G. W. Donley, Ditch Comr. Chester C. Judd is Engr., Dahlgren. Noted on Nov. 3.

STRAIGHTENING CREEK.—Peorio, Ill.—Contract for straightening Prairie Creek in Logan County has been awarded to **BARSTOW & MILLARD**, Peoria. The contract involves the handling of about 600,000 cu. yds. of dirt.

HARBOR WORK.—Milwaukee, Wis.—Bids will not be asked until next year for the proposed harbor project on Lake Michigan at Milwaukee. Noted on Oct. 27.

RIVER FRONT IMPROVEMENTS.—Davenport, Iowa.—Plans are being considered by the city for river front improvements to cost $443,000.

RIVER IMPROVEMENT.—Des Moines, Iowa.—The City Council, on Oct. 28, voted to have revised plans prepared for proposed river improvements, according to the recommendation of the Mayor. New bids will be asked. The work includes about 140,000 sq. yds. of excavation. John W. Budd is City Engr.

DITCH.—Sioux City, Iowa.—The County Supervisors on Oct. 28 adopted a resolution approving and accepting the amended report of C. M. Finley, Engr., for the proposed Little Sioux drainage ditch.

DRAINS.—Storm Lake, Iowa.—H. A. Baxter, Clk. Bd. of Sac and Buena Vista Counties, will receive bids until 9 a. m., Nov. 16, for the construction of drains in Districts Nos. 19-26, approximating 180,540 yds. of excavation and 21,728 ft. of 6 to 24-in. tile.

DRAINS.—Sac City, Iowa.—The County Boards of Sac and Calhoun Counties will receive bids until 1.30 p. m., Dec. 6, for the construction of joint drains Nos. 20-119, comprising 33.513 ft. of 6 to 22-in. tile. Bids will be received for salt glazed vitrified tile, clay tile and cement tile. Harry Baxter is Audr., Sac County, and C. O. Dixon, Rockwell City, Audr., Calhoun County.

DRAIN.—Dakota City, Iowa.—J. G. Devine, County Audr., will receive bids until 1 p. m., Nov. 15, for the construction of drain No. 101-6 in Webster and Humboldt Counties, approximating 7,536 ft. of 8 to 18-in. tile. Estimated cost, $3,442. J. L. Hanrahan is County Audr., Webster County.

DRAINAGE DISTRICT.—Fort Dodge, Iowa.—J. L. Hanrahan, County Audr., will receive bids up to 2.30 p. m., Nov. 18, for the construction of Drainage District No. 86.

FIRE ENGINE.—New Duluth, Minn.—Contract for a gasoline automobile fire engine has been awarded by the Board of Fire Commissioners to **WATEROUS ENGINE CO.**, St. Paul, Minn., at $3,000. T. A. McCall is Secy.

DITCH.—Morris, Minn.—F. E. Ware, County Audr., Morris, received bids on Nov. 4 for constructing Ditch No. 10, about 76,200 yds. of excavation. Estimated cost, $7,621. The lowest bidder was Jerry Sherwood, Litchfield, at 11¼ cts. per yd.

HOSE.—Duluth, Minn.—Bids will be received by the Board of Fire Commissioners until 3 p. m., Nov. 25, for furnishing the city with 2,000 ft. of steam fire engine hose, 2½ ins. internal diameter, fitted with brass automatic screw couplings and Higbee patent threaded hose to be delivered at Fire Headquarters, freight paid. John McCall is Secy.

DITCH.—Redwood Falls, Minn.—L. P. Larson, County Audr., will receive bids until 1 p. m., Nov. 16, for the construction of county ditch No. 16, approximating 37,293 yds. of excavation.

DITCHES.—International Falls, Minn.—Surveys are being made for judicial ditches Nos. 1 and 2. No. 1 will start from Section 19-66-26 and extend west through Dentaylow, a distance of about 15 miles to Nett River, with one branch running north to Cross River. No. 2 will start from Section 25, in Grand Falls Township, and run south about twelve miles.

DITCHES.—Blue Earth, Minn.—Bids were received, Nov. 1, by Jesse L. Herring, County Audr., for constructing county ditches Nos. 8 and 9, approximately 157,916 yds. of excavation, and 76,000 ft. of 6 to 15-in. tile. Estimated cost, $15,791 and $16,911, respectively. Contract for No. 9 has been awarded to **C. W. ROOD CONSTRUCTION CO.**, Grand Rapids, Wis., at $4,274; tile work awarded to **CARL KNUDSON**, Mason City, Iowa, at $5,565; contract for No. 8 was awarded to the **INTERSTATE DRAINAGE & INTERNATIONAL CO.**, Britt, Iowa., at 92 cts. per yd.; tile work to **L. P. ARELSEN**, Clear Lake, Iowa, at $13,800.

DRAINAGE DITCH.—Table Rock, Neb.—The Pawnee County Drainage District, No. 1, has let contract to the **POLLARD-CAMPBELL DREDGING CO.**, Brandeis Bldg., Omaha, Neb., for the construction of 800,000 yds. of drainage ditch.

DITCH.—Mitchell, S. Dak.—A large contract for the construction of ditches will be let in Hanson County shortly for draining Long Lake. There are 1,000 acres in the lake, and it will require a ditch eight miles long to adequately drain it. The water will be turned into Pierre Creek.

LEVEE.—Palmyra, Mo.—The County Court, Palmyra, has organized the Fabius River Levee and Drainage District. It is proposed to construct a levee to protect the territory south of the north line of Marion County.

DRAINAGE SYSTEM.—Helena, Ark.—Winters & Dove, Fort Smith, Ark., are preparing plans for the proposed drainage system for the Beaver Bayou Drainage District. Estimated cost, $105,000. Wellford White is Secy.

DREDGING CHANNEL.—Orange, Tex.—Government engineers have approved the deep water project for Beaumont and Orange, recommending an appropriation sufficient to dredge a channel 25 ft. deep, with a bottom width of 80 ft., from the Port Arthur ship canal to Beaumont and Orange. The estimated cost of the work from the Port Arthur ship canal to Beaumont is $856,000. Of this sum, Beaumont will pay $428,000, this amount coming out of the bond issue of $498,000 for this purpose. The estimated cost of the work from the Neches River to Orange, including the turning basin at Orange, is $287,000, of which Orange is to pay one-half. The Orange County Navigation District has voted bonds for this purpose for $100,000.

ENGINES AND MACHINERY.—Tacoma, Wash.—The contract for equipping the steamer "Misqually" with engines and machinery has been awarded by the Olympia & Tacoma Navigation Co. to the **PHOENIX ENGINEERING CO.**, Tacoma.

PIER.—Bremerton, Wash.—Bids are asked until 11 a. m., Dec. 10, by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for a reinforced concrete pier, Navy Yard, Puget Sound.

WATER-FRONT DEVELOPMENT.—Seattle, Wash.—Articles of incorporation to the extent of $1,000,000 have been filed by the City Development & Tide Land Co. The incorporators are A. L. Hawley, A. W. Hawley and W. D. Wood, all of the Trustee Co., 800 Central Bldg., Seattle. The company will exploit Port Rainier and Port Baker, located at the entrance ends of the Sound, Port Rainier being located at the mouth of the Nisqually River and Port Baker, between Everett and Bellingham. The advantages of these sites will be presented to the railroad companies.

DREDGING.—Marshfield, Ore.—Bids are asked by the Board of Commissioners of Port of Coos Bay, Marshfield, until 10 a. m., Nov. 14, for dredging 3,700 ft. in Kentucky Inlet to a depth of at least 3 ft. below zero tide line, 38 ft. in width at all points across the bottom, with sloping sides.

STEEL DECK.—San Francisco, Cal.—The added contract for the new steel deck of the U. S. transport "Thomas," now being overhauled at the **MOORE & SCOTT IRON WORKS**, has been awarded to that firm. The cost is about $125,000.

DREDGE.—Oroville, Cal.—Work will soon be started on a large dredge for the Natomas Consolidated Mining Co. Estimated cost, $250,000. Newton Cleaveland is Gen. Mgr.

LEVEE IMPROVEMENTS.—Colusa, Cal.—Surveys have been made by J. W. Kaerth, Colusa, for levee improvements in District No. 108, Colusa. About $125,000 will be spent.

WHARF FRANCHISE.—Los Angeles, Cal.—Bids will be received until Nov' 15 by the Board of Public Works for the purchase of a wharf franchise in the inner harbor at San Pedro, wharf to be 500 ft. long and 75 ft. wide. H. B. Ferris is Secy.

**LINING TUNNELS.**—Los Angeles, Cal.—The Pacific Light & Power Corporation has awarded contract to W. F. HEWITT & CO. for lining with concrete and cement certain tunnels on east side of Santa Ana Canyon at 85 cts. per lin. ft. for sides and bottoms; $1 per lin. ft. for arches and $5 per cu. yd. for concrete in portals.

**PLEASURE PIER.**—Oceanpark, Cal.—CHARLES W. CORBALEY, Wilcox Bldg., Los Angeles, Cal., has been awarded contract to build a pleasure pier at the foot of Navy St. for Carrigan, Guthrie & Burmister. The pier will be 40 ft. wide and about 500 ft. long. The sea portion will be constructed of reinforced-concrete piles with wood deck. Norman F. Marsh, Arch., Broadway Central Bldg., Los Angeles, will prepare plans for the amusement buildings.

**TOWNSITE.**—Los Angeles, Cal.—Wilbur D. Cook, Jr., Landsscape Arch., Wrightt & Callender Bldg., has been commissioned to lay out the townsite of Whitton, Cal., for a syndicate of which J. Harvey McCarthy, Grant Bldg., is the head. A feature of the new town will be three diverging boulevards 100 ft. wide. A park of 16 acres will be allowed for a city hall and other municipal buildings. All the streets will be curbed and graded and most of them paved with asphalt. Bids will be asked soon.

**PIPE LINE.**—San Bernardino, Cal.—The Santa Fe Oil Co. in La Habra Valley, six miles west of Fullerton, Cal., is planning to lay a pipe line from its wells at Olinda to the shops here, a distance of 40 miles.

**MACHINERY.**—Bakersfield, Cal.—Bids are asked by H. F. Murdock, Clk. Bd. of Trustees, until 5 p. m., Nov. 14, for furnishing the following machinery: A 2-drum hoist, separate or in combination; one 36-in. diameter revolving rock screen with a capacity of 200 yds. per day; also one 10-HP. gasoline engine.

**EXTENSION OF DIKE.** — Vallejo, Cal. — Bids were received by R. C. Hollyday, Ch. of Bureau of Yards and Docks, Navy Dept., Washington, D. C., on Nov. 5, for extension to dike at the U. S. Navy Yard, Mare Island, Cal. The bids follow: E. D. Crowley, San Francisco, (telegraphic bid), Item (1), $98,000, $88,000; (2) $50, $45; (3) 35cts.; (4) $35, $31. W. N. Concannon Co., 433 Monadnock Bldg., San Francisco, (1) $107,640; (2) $41.30; (3) 37 cts.; (4) $34.50. American Construction Co., Monadnock Bldg., San Francisco, (1) $116,240; (2) $47; (3) 55 cts.; (4) $37.50. Healey-Tibbetts Construction Co., 9 Main St., San Francisco, (1) $103,996; (2) $37.50; (3) 40 cts.; (4) $32.50. Thompson Bridge Co., 103 Main St., San Francisco, (1) $102,300; (2) $37.50; (3) 48 cts.; (4) $31.80. Mercer-Fraser Co., 16 California St., San Francisco, (1) $107,360; (2) $42.90; (3) 38 cts.; (4) $33.20. Hyde, Harjes & Co., Inc., 1 Drumm St., San Francisco, Cal., (1) $116,000; (2) $46; (3) 50 cts.; (4) $42.

**METAL PARTITIONS, ETC.**—San Diego, Cal.—The County Board of Supervisors has awarded the contract to the VAN DORN IRON WORKS, Cleveland, Ohio, for furnishing metal partitions and equipment in the court-house annex at $4,625.

**SMELTER.**—Yerington, Nev.—The Mason Valley Mines Co. has let a contract aggregating $500,000 for construction work on the smelter at Wabuska to the HUGHES CONSTRUCTION CO., Denver, Colo. These contracts embrace all woodwork and brick and cement construction.

**BAY IMPROVEMENTS.**—Toronto, Ont.—See item under Bridges.

**DRY DOCK, ETC.**—Sydney, C. B.—A proposal to establish a shipbuilding dry dock and salvage plant has been made to the City Council by Mr. J. Constant, of London, England. He is prepared to establish: (1) A shipbuilding yard capable of building vessels up to 300 ft. in length, with facilities for extension when required; (2) A floating dock and repair plant capable of docking ships up to about 6,000 tons dead weight capacity; (3) A salvage plant consisting of one powerful screw tug of the most modern type, and two sea-going salvage lighters of about 1,000 tons capacity. He asks the city to grant him a bonus, payable in bonds and divided into four equal parts, as follows: (1) Upon the yard being ready to start work; (2) Upon arrival of floating dock, etc.; (3) Upon arrical of salvage plant; (4) In such a form upon output as might be arranged. This offer is subject to his being able to obtain assistance from the Provincial and Dominion governments.

**DOCKS.**—St. John, N. B.—Borings for the proposed sites for the first two Grand Trunk Pacific Ry. docks to be built at Courtney Bay have been started. Extensive construction will be commenced next spring for the railway's terminal facilities. B. B. Kelliher is Ch. Engr., Winnipeg, Man.

**ICE PIERS.**—Annapolis Royal, N. S.—Bids will be received by R. C. Desrochers, Secy. Dept. Pub. Wks., Ottawa, Ont., until Nov. 22, for the construction of ice piers here. Bids were to have been opened on Nov. 8.

**BREAKWATER.**—North Ingonish, N. S.—Bids will be received until 4 p. m., Nov. 22, by R. C. Desrochers, Secy. Dept. Pub. Wks., Ottawa, Ont., for a breakwater at Burke's Head near here

**STEAMERS.**—Montreal, Que.—The Canadian Pacific Ry. Co. has decided to build four steamers for a fast service between Nova Scotian ports and Boston and New York. The vessels will be 450 ft. long with a speed of 20 knots and capacity of 5,000 tons. Address Sir Thomas Shaughnessy, Pres., Montreal.

**SUBWAY.**—Regina, Sask.—The city and the Northern Pacific Ry. Co. have agreed concerning the division of cost of the new $250,000 subway. L. A. Thornton is City Engr.

**STEEL BOAT.**—Victoria, B. C.—The BRITISH COLUMBIA MARINE R. R. CO., Vancouver, B. C., has been awarded the contract by the Canadian Pacific Ry. Co. for a steel transfer bark to ply between here and the mainland. It will be 250 ft. long, 42 ft. beam and 12 ft. in depth.

**BRASS FITTINGS, ETC.**—Victoria, B. C.—Bids were received on Oct. 24 by W. W. Northcott, Civic Purchasing Agt., for brass fittings, lead and galvanized piping and galvanized fittings. Contract has been awarded to the MILLER CO., LTD., London, Ont., at $12,636.

## U. S. POSSESSIONS.

(* *Denotes that this work is advertised in Engineering News.*)

**STEEL GIRDERS.**—Panama.—Bids will be received by Capt. F. C. Boggs, Corp Engrs., U. S. A., Purchasing Officer, Isthmian Canal Comn., Washington, D. C., until 2 p. m., Nov. 14, for furnishing 18 girders, steel, marked G1; eight marked G2; eight marked G3; and two marked G4.

**MOTOR GENERATOR SETS.**—Panama.—Bids will be received by Capt. F. C. Boggs, Corps Engrs., U. S. A., Purchasing Dept., Isthmian Canal Comn., Washington, D. C., until 2.30 p. m., Nov. 11, for furnishing two 75 KW. motor generator sets and necessary appurtenances.

**STEEL BARS.**—Panama.—Contract for furnishing to the Isthmian Canal Commission, Washington, D. C., square reinforcing bars of various sizes under Class I, Circular 609, has been awarded to the J. B. KENDALL CO., Washington, at $24,524. Bids were opened on Oct 31. List of bidders noted on Nov. 3.

**CRANK SHAFT.**—Panama.—Bids are asked until Nov. 11 by Capt. F. C. Boggs, Corps Engrs., U. S. A., Purchasing Officer, Isthmian Canal Comn., Washington, D. C., for furnishing one crank shaft forged steel of soft or low carbon steel. Bids should state approximate weight of material offered and price per lb.

**CANNERY.**—Hawaii.—A merger has been effected between the California Fruit Packing Association and the Consolidated Canning Co. as a result of which a large pineapple cannery will be erected soon at Iwilei. The Consolidated Canning Co. expects to erect on the site just acquired a cannery and storehouses costing between $70,000 and $100,000. According to present plans the buildings will be constructed of concrete or steel. The American Can Co. will also erect a $40,000 building.

**RUBBER BELTING.**—Panama.—Bids were opened on Nov. 1, by Capt. F. C. Boggs, Corps Engrs., U. S. A., Purchasing Officer, Isthmian Canal Comn., Washington, D. C., for furnishing 1,300 ft. of leather belting, 6 and 12-ply, as follows: Boston Belting Co., Boston, Mass., $2,806; Boston Woven Hose & Rubber Co., Boston, $2,798; Combination Rubber Mfg. Co., New York, $2,788; Gutta Percha & Rubber Mfg. Co., New York, $3,740; Hamilton Rubber Mfg. Co., Trenton, N. J., $2,496; New Jersey Car Spring & Rubber Co., Jersey City, N. J., $2,565; Peerless Rubber Mfg. Co., New York, $3,481.50; Ruboil Belting Co., Philadelphia, Pa., $3,182 or $3,024; United & Globe Rubber Mfg. Co., Trenton, N. J., $2,667; Voorhees Rubber Mfg. Co., Jersey City, $3,449.

## FOREIGN CONTRACTS.

(* *Denotes that this work is advertised in Engineering News.*)

**RAILWAY CARRIAGES.**—China.—Bids are asked by the Tientsin-Pukow Ry. Co. until Dec. 1 for twelve third-class carriages.

**DRY-DOCK, ETC.**—Argentina.—Bids are asked by the Public Works Department of Buenos Aires until Dec. 15 for a dry-dock and tidal basin.

**SUGAR MILL.**—Formosa.—The contract for erecting a 1,100-ton sugar mill for the Meiji Seito Kaisha, Shoro, Formosa, has been awarded to the HONOLULU IRON WORKS, Honolulu, H. T.

**ELECTRIC LIGHTING.** — Turkey. — The Turkish Ministry of Commerce and Labor, it is reported, has awarded the electric lighting concession for the European quarter of Constantinople to the Societe Ganz., Budapest, Hungary, and others subject to the approval of the Council of Ministers. The balance of the group of concessionaires is composed of French firms with headquarters at Paris.

**PROPOSED PUBLIC IMPROVEMENTS IN JAPAN.**—One of the estimates of the Home Department is for the improvement of the Shimonoseki Straits, at an expense of $6,474,000, which is to extend over a period of ten years; it is also planned to enlarge the Government Iron Works at Wakamatsu until the plant is large enough to supply the entire demand of Japan for steel and iron. Harbor works are planned for the ports of Kagashima and Oita, in the Island of Kyuchu, the money therefor to be raised jointly by the municipalities and prefectures, assisted by the Government. The city of Fukuoka-Hakata is planning a water-works system to cost $2,988,000, toward which the Government is expected to be a large contributor. It will take three years to complete the works.

The budget for the next fiscal year is to contain an item of about $300,000 to make the Fukuoka Medical University independent of the Kyoto University. It will be called the Kyushu University, and engineering and scientific colleges will be added to the medical college.

A charter has been granted for the construction of an electric tramway from Sonogi, on the Gulf of Omura, 40 miles from Nagasaki, across the peninsula to Azambara, on the Karatsu branch of the Imperial Kyushu Railway, a distance of 30 miles, which will give rail communication to a fertile section now difficult of access.

The construction of a light narrow-gage railway, to connect Isahaya, a station on the Kyushu Railway, 20 miles from Nagasaki, with Shimabara, a town on the Shimabara Gulf, a distance of 25 miles, was to be inaugurated on Sept. 10, 1910.

## EXAMINATIONS.

(* *Denotes that this work is advertised in Engineering News.*)

**EXAMINERS OF EFFICIENCY, GENERAL.**—Civil Service Commission, City of Chicago, will hold an examination Nov. 22 for positions in connection with the efficiency division. Examination for Examiner of Efficiency, General, will consist of the following subjects: Educational, 3 points; Experience, 4 points; Special Subjects, 8 points. The "Special Subjects" will include questions on Civics, Efficiency, Organization, Systematizing, etc. Local residence will be waived in the case of this examination. The compensation has not been fixed, but will range from $1800 a year upwards. Applications should be made to E. O. Greifenhagen, Engineer Efficiency Division, Civil Service Commission.

**INDUSTRIAL TEACHER.**—Washington, D. C.—The U. S. Civil Service Commission announces an examination Dec. 28, to fill vacancies as they may occur in the position of Industrial Teacher in the Philippine Service. The entrance salary of the majority of appointees will be $1,200 per annum, although some appointments may be made at salaries of $1,000 or $1,100, based upon the experience and the relative standing in the examination, and they will be eligible for promotion up to $2,000 a year for teachers. Eligibility in the assistant examination is required for promotion to the position of division superintendent, which carries salaries ranging from $1,600 to $3,000. The work of American male teachers is largely of a supervisory character, and the higher positions are filled as vacancies occur by the promotion of those who have demonstrated their efficiency and ability in the service. Men only will be admitted to the examination. Teachers of carpentry and forging and machine-shop practice are in [illegible] demand. There is need for men with su[illegible]nt knowledge of machinery to run s[illegible] sawmills. Practical teachers who are m[illegible]s of their trade will find responsible and [illegible]unerative positions. More than twen[illegible] provincial schools are fully equipped with [illegible]d-working machinery, and many have bo[illegible]ood-working and iron-working machin[illegible]. The examination will consist of the [illegible]ect mentioned below, weighted as ind[illegible]: Letter writing on some subject re[illegible] to the trade, 15 points; penmanship ([illegible]d on letter writing), 5 points; Arithm[illegible] (comprising problems involving addition[illegible]btraction, multiplation, division, element[illegible] bookkeeping, percentage, decimals and [illegible]blems in mensuration), 10 points; metho[illegible] presenting and teaching the trade, 20 [illegible]; practical question in (a) iron work[illegible] and (b) wood working (competitors ma[illegible] examined in either (a) or (b) or ma[illegible]ke both if they desire), 30 points; ex[illegible]ce and training, 20 points. Applicant[illegible]st have reached their 20th, but not their [illegible]h birthday. Examination form 2.

(Continued on page 231

## CONTRACT PRICES.

(* *Denotes that this work is advertised in Engineering News.*)

**TRACK ELEVATION.**—Philadelphia, Pa.—Bids were opened on Oct. 1[illegible] by the Philadelphia & Reading Ry. Co. for the Masonry and Embankment between Somerset St. and Trenton Ave.: (A) John McMenamy, Philadelphia, Pa. The other bidders were: (B) Whiting-Middleton Construction Co., Baltimore, Md.; (C) Ryan & Reilly Coleman Bldg., Philadelphia, Pa.; (D) American Paving & Construction Co., Philadelphia, Pa.; (E) James McGraw Co., Philadelphia, Pa. The itemized bids were as follows:

TRACK ELEVATION, PHILADELPHIA.

| | A | B | C | D | E |
|---|---|---|---|---|---|
| Excavation, without classification, per cu. yd... | $2.40 | $1.50 | $1.07 | $ .90 | $ .87 |
| Embankment, provided and placed by contractor, per cu. yd.................................. | .31 | .25 | .25 | .35 | .15 |
| Embankment, delivered to and placed by contractor, per cu. yd.......................... | .31 | .25 | .25 | .30 | .15 |
| Third Class Masonry, above neat line, per cu. yd. | 7.00 | 4.75 | 6.00 | 5.50 | 5.00 |
| Third Class Masonry, in foundations, per cu. yd. | 6.00 | 4.50 | 5.75 | 5.75 | 5.00 |
| Stone Masonry in underpinning, per cu. yd..... | 10.00 | 15.00 | 20.00 | 25.00 | 15.00 |
| Copings 1-3-6 concrete, per cu. yd............ | 10.00 | 9.00 | 7.00 | 7.50 | 7.25 |
| Granite bridge seats or pedestal blocks, per cu. yd. ................................ | 10.00 | 60.00 | 50.00 | 30.00 | 30.00 |
| Concrete masonry 1-2-4 (1½ in. stone)per cu. yd. | 7.60 | 12.00 | 10.00 | 10.00 | 7.25 |
| Bridge seats and pedestal blocks, per cu. yd.... | 7.90 | 9.00 | 8.00 | 10.50 | 7.50 |
| Concrete masonry 1-3-6 above neat line, pr. cu. yd. | 6.15 | 7.25 | 6.70 | 6.40 | 6.00 |
| Concrete masonry, 1-3-6 above neat line, street Surface, per cu. yd.......................... | 6.60 | 7.75 | 6.73 | 6.40 | 6.00 |
| Concrete masonry 1-3-6, in foundations, per cu. yd. ........................................ | 6.06 | 6.50 | 5.67 | 6.40 | 6.00 |
| Monuments, 6x6-ins.x3-ft., 6-in., 1-3-6 concrete, per cu. yd.................................. | 1.00 | 5.00 | 2.00 | 3.00 | 2.25 |
| Brick masonry, in cement mortar, per cu. yd.... | 20.00 | 10.00 | 12.00 | 12.50 | 12.00 |
| Brick masonry, in underpinning, per cu yd...... | 22.00 | 20.00 | 20.00 | 22.50 | 17.00 |
| Dry stone packing, per cu. yd................. | 4.55 | 2.50 | 2.75 | 2.95 | 2.25 |
| Corrugated asbestos boards, per sq. ft......... | .10 | .18 | .12 | .12 | .17 |
| Water Pipe, C. I., 4 ins. to 6 ins., per lb........ | .035 | .04 | .04 | .05 | .03 |
| Water Pipe, C. I., 8 in. to 12 in., per lb..... | .035 | .04 | .06 | .05 | .03 |
| Clay Pipe, 4 in., per lin. ft.................. | .70 | .30 | .25 | .50 | .20 |
| Clay Pipe, 6 in., per lin. ft.................. | .75 | .50 | .40 | .50 | .25 |
| Clay Pipe, 8 in., per lin. ft.................. | .80 | .50 | .50 | .75 | .40 |
| Clay Pipe, 10 in., per lin. ft................. | 1.15 | .50 | 1.50 | 1.00 | .50 |
| Clay Pipe, 12 in., per lin. ft................. | 1.50 | .75 | 1.50 | 1.00 | .90 |
| Clay Pipe, 15 in., per lin. ft................. | 1.75 | 1.00 | 1.90 | 1.50 | 1.25 |
| Clay Pipe, 18 in., per lin. ft................. | 2.15 | 1.25 | 1.90 | 2.50 | 1.35 |
| Clay Pipe, 6 in. back of retaining walls, per lin. ft.................................... | .25 | .30 | .15 | .18 | .25 |
| Yellow pine, miscellaneous, per 1,000 ft. B. M.. | 70.00 | 40.00 | 60.00 | 60.00 | 40.00 |
| Yellow pine, short leaf, per 1,000 ft. B. M...... | 60.00 | 32.00 | 60.00 | 50.00 | 37.00 |
| Hemlock, miscellaneous, per 1,000 ft. B. M. .... | 60.00 | 40.00 | 60.00 | 50.00 | 37.00 |
| Yellow pine, for foundations, per 1,000 ft. B. M. | 70.00 | 45.00 | 60.00 | 50.00 | 40.00 |
| Yellow pine, short leaf, for foundations, per 1,000 ft. B. M. | 35.00 | 35.00 | 40.00 | 34.00 | 37.00 |
| Hemlock for foundations, per 1,000 ft. B. M.... | 50.00 | 40.00 | 50.00 | 34.00 | 37.00 |
| White oak, per lin. ft......................... | 1.00 | .50 | .35 | .75 | .60 |
| Yellow pine, per lin. ft....................... | 1.00 | .45 | .30 | .65 | .40 |
| Spruce or hemlock, per lin. ft................. | 1.00 | .35 | .30 | .65 | .40 |
| Reinforcing steel, per lb...................... | .04 | .05 | .05 | .05 | .03 |
| Steel rails, 70-lb., per lb.................... | .03 | .025 | .035 | .035 | .02 |
| Structural steel, per lb....................... | .04 | .06 | .06 | .04 | .03 |
| Wrought iron or steel, per lb.................. | .06 | .07 | .06 | .04 | .03 |
| Cast iron, per lb.............................. | .06 | .05 | .05 | .03 | .03 |
| Gas pipe railing on retaining walls, per lin. ft.. | .50 | 1.00 | .25 | .18 | .40 |
| Newel posts, each ............................ | 10.00 | 10.00 | 1.00 | 2.00 | 1.00 |
| Foreman, per hr............................... | .65 | .50 | .50 | .75 | .50 |
| Erector, per hr............................... | .75 | .70 | .60 | .75 | .60 |
| Erector, overtime, per hr..................... | 1.30 | 1.05 | .60 | .75 | .90 |
| Riveter, per hr............................... | .70 | .60 | .50 | .75 | .60 |
| Riveter, overtime, per hr..................... | 1.00 | .90 | .50 | .75 | .90 |
| Laborer, per hr............................... | .25 | .25 | 1.75 | .25 | 1.75 |
| Laborer, overtime, per hr..................... | .50 | .35 | .25 | .50 | 1.75 |
| Engineer, per hr.............................. | .70 | .40 | .50 | .50 | .40 |
| Engineer, overtime, per hr.................... | 1.00 | .60 | .50 | .75 | .40 |
| Blacksmith, per hr............................ | .50 | .40 | .50 | .50 | .40 |
| Blacksmith, overtime, per hr.................. | .75 | .60 | .50 | .75 | .40 |
| Blacksmith's helper, per hr................... | .40 | .30 | .25 | .25 | .25 |
| Blacksmith's helper, overtime, per hr......... | .50 | .45 | .25 | .50 | .25 |
| Carpenter, per hr............................. | .60 | .50 | .60 | .75 | .50 |
| Carpenter, overtime, per hr................... | .70 | .75 | .60 | .25 | .75 |
| Stone mason, per hr........................... | .75 | .50 | .60 | .60 | .45 |
| Stone mason, overtime, per hr................. | 1.30 | .75 | .60 | .90 | .45 |
| Cement finisher, per hr....................... | .75 | .50 | .60 | .60 | .50 |
| Cement finisher, overtime, per hr............. | 1.00 | .75 | .60 | .90 | .50 |
| Stone cutter, per hr.......................... | .75 | .60 | .60 | .60 | .50 |
| Stone cutter, overtime, per hr................ | 1.30 | .90 | .60 | .90 | .75 |
| Drill runner, per hr.......................... | .75 | .40 | .60 | .40 | .30 |
| Drill runner, overtime, per hr................ | 1.00 | .60 | .60 | .40 | .30 |
| Watchman, day work, per hr.................... | .30 | .20 | .20 | .25 | .20 |
| Watchman, night work, per hr.................. | .40 | .20 | .20 | .40 | .20 |
| Horse and cart, including driver, per hr...... | .50 | .40 | .35 | .50 | .30 |
| Team (2 horses and wagon), inc. driver, per hr. | 1.00 | .75 | .55 | 1.00 | .35 |
| Derrick, per hr............................... | 2.00 | 1.00 | 1.00 | 1.00 | .50 |
| Hoisting engine and boiler, per hr............ | 2.00 | 1.00 | 2.00 | 1.00 | .75 |
| Pump and boiler, per hr....................... | 2.00 | .50 | 1.00 | 1.00 | .75 |
| Steam drills, per hr.......................... | 1.00 | .50 | 1.00 | 1.00 | .20 |
| Gas pipe hand railing, per lin. ft............ | 1.00 | 2.00 | 1.00 | 1.00 | .40 |
| Newel posts, each............................. | 25.00 | 25.00 | 9.00 | [illegible].50 | 1.00 |
| Picket fence on retaining walls, per lin. ft.... | 2.50 | 1.00 | 1.35 | 1.50 | 1.15 |
| Grass sodding, per sq. yd..................... | 1.00 | .30 | .25 | .30 | .25 |
| Manhole, complete ............................ | 100.00 | 60.00 | 50.00 | [illegible]0.00 | 40.00 |
| Water supply for ash pit, complete............ | 1,000.00 | 750.00 | 850.00 | 1,1[illegible]0.00 | 500.00 |
| Standard wooden fence, per lin. ft............ | 1.50 | 1.25 | 1.50 | 1.50 | 1.85 |
| Special wall, complete........................ | 7,425.00 | 5,500.00 | 6,000.00 | 6,[illegible]00.00 | 4,000.00 |
| Special wall, complete........................ | 11,850.00 | 9,000.00 | 9,500.00 | 9,[illegible]75.00 | 7,500.00 |
| Totals ....................................... | 186,859 | $153,068 | $133,599 | $1[illegible]0,352 | $117,426 |
| Time, working days............................ | 400 | 300 | 300 | 300 | 300 |

**BRIDGES.—Philadelphia, Pa.—The contract was awarded Oct. 11, by the Philadelphia & Reading Ry. Co. for the construction of two steel bridges over Kensington and Frankford Ave. to (A) the AMERICAN BRIDGE CO., New York, N. Y. The other bidders were: (B) Lewis F. Shoemaker & Co., Philadelphia, Pa.; (C) Penna. Steel Co., Philadelphia, Pa.; (D) Owega Bridge Co., Philadelphia, Pa.; (E) Phoenix Bridge Co., Philadelphia, Pa.; (F) McClintic Marshall Construction Co., Pottstown, Pa. The itemized bids were as follows:**

RAILROAD BRIDGES, PHILADELPHIA.

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| Shields, per lb. | $0.03¾ | $0.05 | $0.07 | $0.05¼ | $0.03 | $0.047 |
| Newel Posts, for shields, each | 11.50 | 5.00 | 18.00 | 20.00 | 11.25 | 15.50 |
| Structural Steel Work, per lb. | .03 | .03¼ | .03 | .04¼ | .. | .03 |
| Cast Iron, per lb. | .02¾ | .04 | .04 | 0.03½ | .03 | .03½ |
| Yellow Pine, long leaf per 1,000 ft. B. M. | 47.00 | 40.00 | 50.00 | 45.00 | 40.00 | 45.00 |
| Asphalt Mastic, per cu. yd. | 32.00 | 32.00 | 34.00 | 32.00 | 30.00 | 33.00 |
| Concrete 1-3-6, per cu. yd. | 6.00 | 7.00 | 6.00 | 6.50 | 6.00 | 6.60 |
| Foreman, per hr. | .85 | 1.50 | 1.40 | 1.00 | .60 | .90 |
| Erector, per hr. | .60 | .75 | .70 | .55 | .50 | .60 |
| Erector, overtime, per hr. | .90 | 1.00 | 1.20 | .85 | 1.00 | .85 |
| Riveter, per hr. | .60 | .75 | .70 | .55 | .50 | .60 |
| Riveter, overtime, per hr. | .90 | 1.00 | 1.20 | .85 | 1.00 | .85 |
| Laborer, per hr. | .30 | .75 | .40 | .20 | .25 | .25 |
| Laborer, overtime, per hr. | .45 | 1.00 | .60 | .30 | .50 | .35 |
| Engineer, per hr. | .60 | 1.00 | .70 | .55 | .50 | .60 |
| Engineer, overtime, per hr. | .90 | 1.50 | 1.20 | .85 | 1.00 | .85 |
| Blacksmith, per hr. | .60 | .75 | .70 | .55 | .40 | .60 |
| Blacksmith, overtime, per hr. | .90 | 1.00 | 1.20 | .85 | .80 | .85 |
| Blacksmith's Helper, per hr. | .40 | .75 | .70 | .25 | .20 | .40 |
| Blacksmith's Helper, overtime, per hr. | .60 | 1.00 | .90 | .55 | .60 | .60 |
| Carpenter, per hr. | .50 | .75 | .70 | .55 | .40 | .55 |
| Carpenter, overtime, per hr. | .75 | 1.00 | 1.20 | .85 | .80 | .80 |
| Stone Mason, per hr. | .55 | .75 | .80 | .45 | .. | .60 |
| Stone Mason, overtime, per hr. | .75 | 1.00 | 1.50 | .65 | .. | .85 |
| Stone Cutter, per hr. | .55 | .75 | .70 | .60 | .. | .60 |
| Stone Cutter, overtime, per hr. | .75 | 1.00 | 1.20 | .90 | .. | .85 |
| Cement Finisher, per hr. | .50 | .75 | .50 | .55 | .50 | .60 |
| Cement Finisher, overtime, per hr. | .75 | 1.00 | .80 | .85 | .75 | .85 |
| Use of Derrick, per hr. | 2.00 | 5.00 | 6.20 | 1.00 | 2.00 | .50 |
| Use of Hoisting Engine, Boiler and Fuel, per hr. | 3.00 | 5.00 | 7.20 | 1.50 | 2.00 | .60 |
| Use of Boiler, Pumps, Fuel, per hr. | 3,00 | 2.00 | 7.20 | 1.00 | .. | 1.00 |
| Bridge over Kensington Ave., furnished and erected complete | $51,627 | $57,798 | $59,500 | $64,293 | $54,368 | $53,500 |
| Bridge over Frankford Ave., furnished and erected complete | $72,804 | 80,248 | $84,650 | $94,100 | $75,235 | $73,300 |
| Totals | $125,429 | $139,246 | $145,564 | $159,567 | $130,348 | $129,859 |
| Time—Working Days | 175 | 220 | 230 | 150 | 120 | 200 |

## EXAMINATIONS.

(Continued from page 230.)

FORTIFICATION DRAFTSMAN.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Dec. 7-8, to secure eligibles from which to make certification to fill vacancies as they may occur in the position of Fortification Draftsman. The usual entrance salary for this position is $1,500 a year. The examination will consist of the subjects mentioned below, weighted as indicated: Engineering (including building materials and construction, elements of design in steel and reinforced concrete), 30 points; Topographic drawing, lettering, and preparation of detailed drawings from sketches or descriptions, 40 points; Training and experience, 30 points. Applicants must have reached their 18th birthday. Examination form 1312.

EXAMINERS OF EFFICIENCY, ENGINEERING.—The Civil Service Commission, City of Chicago, will hold an examination Nov. 21 for the position of Examiner of Efficiency. The examiners of efficiency specializing in engineering will be judged according to the following schedule: Mathematics, 3 points; Experience, 3 points; Report, 2 points; Technical, 4 points. The papers on "Report" and "Technical" will include questions on Civics, Organization of Engineering Works, Cost Measuring, etc. Local residence will be waived in the case of this examination. The compensation has not been fixed, but will range from $1,800 a year upwards. Applications should be made to E. O. Greifenhagen, Engineer Efficiency Division, Civil Service Commission.

MINERAL EXAMINER.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Dec. 7 to secure eligibles from which to make certification to fill vacancies as they may occur in the positions of Mineral Examiner in the Forest Service at $1,800 a year, and also in positions of surveyor for the inspection of mineral deposits under the Chief of the Field Divisions of the General Land Office, at $7 a day, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancies by reinstatement, transfer, or promotion. The examination will consist of the subjects mentioned below, weighted as indicated: Spelling (twenty words of more than average difficulty), 5 points; Arithmetic (fundamental rules, fractions, percentage, interest, discount, analysis and statement of simple accounts), 15 points; Penmanship (the handwriting of the competitor in the subject of report writing will be considered with special reference to the elements of legibility, rapidity, neatness, general appearance, etc.), 5 points; Report writing (test in writing in letter form a report of from 150 to 200 words in length, summarizing and arranging in logical order a series of facts included in a given statement of 400 to 500 words), 10 points; Practical questions (including surveying), 35 points; Training and experience, 30 points. The duties of this position require an expert knowledge of geology, mineralogy, practical mining, and the land laws concerning mining claims on the public domain. Applicants must have reached their 21st birthday. Examination form 1800.

INSPECTOR OF MECHANICAL AND ELECTRICAL ENGINEERING.—Washington, D. C.—The U. S. Civil Service Commission announces the postponement to Dec. 7-8-9, of the examination announced to be held on Nov. 9-10-11, 1910, to secure eligibles from which to make certification to fill a vacancy in the position of Inspector of Mechanical and Electrical Engineering in the Supervising Architect's Office, at $2,190 a year, and vacancies requiring similar qualifications as they may occur in any branch of the service. The examination will consist of the subjects mentioned below, weighted as indicated: Practical questions in mechanical and electrical engineering, 50 points; drawing and design, 20 points; training and experience, 30 points. The duties of the position consist of inspecting and testing the mechanical and electrical equipments entering into the modern Government or office building. It is desired that applicants shall have had practical experience in the design, construction, and inspection of work in the following branches of mechanical, electrical, and sanitary engineering: Heating and ventilating apparatus, plumbing, water supply and drainage, conduit and wiring work, elevators, vacuum cleaning systems, electric-clock system, pneumatic-tube systems, and electric generating plants. The duties of the position in which the vacancy exists at present will necessitate constant travel on Department business. Three days will be required for this examination. Applicants must have reached their 20th birthday. Examination form 1312.

CARTOGRAPHIC DRAFTSMAN.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Dec. 7-8, to secure eligibles from which to make certification to fill a vacancy in the position of Cartographic Draftsman at $3.84 a day, Naval War College, Newport, R. I., and vacancies requiring similar qualifications as they may occur in any branch of the service, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion. Men only will be admitted to this examination. The examination will consist of the subjects mentioned below, weighted as indicated: Drawing (a specimen of topographic drawing to be reproduced in India ink), 25 points; Lettering (tests of short words in different styles of lettering, and figures), 25 points; Mathematics (comprising arithmetic, algebra to and including problems involving quadratics, plane and solid geometry, plane trigonometry, logarithms, mensuration, and projections), 20 points; Experience in hydrographic drafting and surveying, 30 points. Only those applicants who have had experience in hydrographic surveying or drafting will be admitted to this examination. Applicants must have reached their 18th birthday. Examination form 1312.

SCIENTIFIC ASSISTANT IN SOIL BACTERIOLOGY (MALE) and SCIENTIFIC ASSISTANT IN TOBACCO CHEMISTRY (MALE).—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Dec. 7-8, to secure eligibles from which to make certification to fill a vacancy in the position of Scientific Assistant in Soil Bacteriology, at a salary of from $1,400 to $1,600 a year, in the Bureau of Plant Industry, Department of Agriculture, and to establish a register from which certification may be made to fill one or two vacancies in the position of Scientific Assistant in Tobacco Chemistry, at salaries ranging from $1,200 to $1,500 a year, in the Bureau of Plant Industry, dependent upon the experience and qualifications of the employees as disclosed by the examination; and vacancies requiring similar qualifications as they may occur in the Department of Agriculture, unless it shall be decided, in the interest of the service, to fill the vacancies by reinstatement, transfer or promotion. This examination will comprise a basis, consisting of obligatory subjects, the major optional subject of soil bacteriology or tobacco chemistry, and the minor optional subjects—French, German, and Italian. Competitors are required to be examined in one of the major optional subjects. They are not required to be examined in the minor optional subjects, but may take any one or more of them. The minor optional subjects require simple prose translations into English. Applicants should state definitely, in answer to question 1 of the application, in which major optional and in which, if any, minor optional subjects they desire to be examined. Each competitor will be required to pass in the basis, or obligatory, subjects before any rating will be given in the optional subjects. Obligatory (or basis) subjects: English composition and report writing, 30 points; Arithmetic (fundamental rules, fractions, percentage, interest, discount, analysis, and statement of simple accounts), 20 points; General educational training, 50 points. No competitor who attains an average percentage of less than 70 in the obligatory subjects and an average percentage of less than 70 in the major optional subject selected will be eligible for appointment. Eligibles will be certified in the order of their average percentage in the major optional subject. The time allowed for the major optional subjects will be indicated on the question sheets. One hour will be allowed for each minor optional subject taken. The subject of soil bacteriology and tobacco chemistry will comprise the following elements: A thesis, preferably upon some phase of the subject, to be submitted with the application, 20 points; Practical questions, 60 points; Training and experience in the specific work covered by the subject, 20 points. The thesis required may be either typewritten or in the handwriting of the applicant, and on any size paper most convenient. Published articles written by the applicant may be submitted as a thesis. If the thesis has no bearing whatever upon the optional subject, no credit will be given for the thesis unless a rating of at least 70 per cent. is received in the practical questions and in training and experience. The length of the thesis may be determined by the applicant. Two days will be required for this examination. For the position of scientific assistant in soil bacteriology, the age limit will be 20 years or over on the date of the examination. For the position of scientific assistant in tobacco chemistry, applicants will be required to have reached their twentieth birthday, but not their fortieth birthday, on the date of the examination. Examination form 1312.

## INDUSTRIAL NOTES.

Readers are requested to send short notes regarding new contracts they are about to award, or have secured, for our news columns. Changes in firms and changes in addresses of contractors and supply houses are also wanted. News regarding new developments and contractors machinery or equipment is desired, but write-ups will not be inserted under any circumstance. Notes must contain news giving definite information of interest to readers of Engineering News.

PRICE & McLANAHAN announce that they have removed their offices to the corner of 16th and Walnut Sts., Philadelphia.

IN THE NEW FREIGHT STATION, which will be erected by the Chicago & Rock Island R. R. in Kansas City, Mo., ferrolithic plates will be used. These plates are made by the Berger Mfg. Co., Canton, Ohio.

S. B. WHINERY, 95 LIBERTY ST., New York City, announces that he is now representing the American Well Works of Aurora, Ill., in the sale of centrifugal and turbine pumping machinery in the district of New York.

THE BARNEY & SMITH CAR CO., Dayton, Ohio, have just placed an order with Tate, Jones & Co., Inc., Pittsburg, Pa., for two portable oil rivet forges, which makes a total of nine of this type of forge which they have purchased from this company.

THE DUFF MFG. CO., Pittsburg, Pa., has recently taken over the business of Wm. Forgie, Washington, Pa. This consists of all the rights and privileges connected with the making of oil well jacks, originated in the early days of the business by Wm. Forgie.

THE CENTRAL ENGINEERING & CONSTRUCTION CO., has recently been incorporated in Indianapolis. The company's work will consist chiefly of constructing roads, streets and buildings. Edward L. Powers, Martin W. Addy and E. M. Powers are directors.

THE RAILWAY STEEL SPRING CO., 30 Church St., New York City, announces that Mr. F. F. Fitzgerald has been elected President of the company; Mr. Scott R. Hayes, formerly General Sales Agent, has been elected Vice-President and H. H. Scoville has been elected Assistant Secretary.

AN ANNOUNCEMENT HAS BEEN MADE that the McKiernan-Terry Drill Co., 115 Broadway, New York City, is the name of the consolidated interests of the McKiernan Drill Co., and the Terry Core Drill Co. The company will manufacture a full line of rock drills, hammer drills, core drills, coal cutters, sheet pile drivers and compressors.

THE J. I. CASE THRESHING MACHINE CO., Racine, Wis., has recently signified its intention of giving a very practical demonstration of good roads. The company has offered to the Town Board, Kenosha County, Wis., the necessary machinery and men to operate it, to build a road from Kenosha through the towns of Somers and Mt. Pleasant.

DAVID GAEHR, CONTRACT ENGINEER, Cleveland, Ohio, announces the removal of his offices to the Rockefeller Building, Cleveland. The present line of handling conveying, elevating and transmission machinery and such natural adjuncts as power equipment used in its connection will be continued. The designing of special machinery will also be continued as in the past.

ARTHUR N. DOUD, 6720 Dunham Ave., Cleveland, Ohio, announces that he has opened an office as Consulting Engineer, making a specialty of designing concrete handling machinery and contractors' plants. Layouts for the economical handling of material is an especial part of the work. He has sold to the Acme Equipment & Engineering Co., Cleveland, the patents on Acme center dump buckets.

THE WIRE PLANT of the Jones & Laughlin Steel Co. of Aliquippa, Pa., was started a few days ago and is now running full time. The rod mill has been in operation for several weeks rolling ordinary grades of rod, together with high carbon rods, screw stock and bolt and rivet rods. The new tin plate plant at the same place, which is also a new product of the Jones & Laughlin Co., is running full time.

THE NUMBER OF IDLE FREIGHT CARS was reduced in the fortnight ending Oct. 26, about 6,000, so the net surplus on that date was 7,234 cars. This is the smallest number of idle cars shown this year and in fact is smaller than at any time since 1907. The shortage is practically negligible, being less than one half of one per cent. of the total number of cars owned by American railways. The lowest point reached in 1909 was on Oct. 27, so that the surplus may reasonably be expected to increase from now on.

THE ATLAS PORTLAND CEMENT CO., 30 Broad St., New York City, makes the following official announcement: "Mr. John R. Morron of Chicago, who has been President of Peter Cooper's Glue Co., has been elected President of the Atlas Portland Cement Co. in the place of J. Rogers Maxwell, who resigned on account of ill health. The change becomes effective Nov. 1, 1910. Mr. Morron was selected for the presidency by Messrs. J. P. Morgan & Co., who have lately become interested in the Atlas Company. Mr. Maxwell has been elected Chairman of the Board."

FIRE-KILLED TIMBER, which includes the timber left in the Northwest in the district burned this last summer, is now being offered for sale. The bulk of this timber is in Idaho and Montana. The quantity of timber for sale can be only roughly estimated, but it will include several billion feet. In order to save it from deterioration, however, it must be cut within the next three years. It is proposed, therefore, to sell this timber at a reduced stumpage rate which will justify lumbermen and logging contractors in investing money to remove it.

The opportunities offered in this fire belt include practically all kinds of logging chances—from operations involving large capital which can handle a hundred million feet and more, down to the small saw-mill men or tiemaker, who desires a hundred thousand feet or less. There are numerous chances for tiemakers along the railroads, for the men who handle cedar poles and posts, for the small saw-mill men of limited capital, and even for the pulp men.

Much of the fire-killed timber can never be logged, because it is inaccessible and cannot be removed at a profit, but the amount of accessible timber is immense, and the government is putting it on the market at a rate which it will probably never again offer. As a rule, the stumpage is being set at about one-half the rate asked when the timber was green The government contracts for fire-killed timber will not require the piling of brush, as the fires cleared many of the areas of dense undergrowth, thereby decreasing the cost of logging. These two items mean a saving of approximately 50 cts. per M. in the cost of logging operations. As a rule, the stumpage prices vary from $1 to $3 per M. ft., depending upon species and accessibility.

The bulk of the fire-killed timber, which offers opportunities for large and small operations, is on the water-sheds of five large rivers—the St. Joe and Coeur d'Alene Rivers in the Coeur d'Alene National Forest, Idaho; the St. Regis drainage in the Lolo National Forest; the drainage of the Flathead River in the Blackfeet, Flathead and Lewis and Clark National Forests, Mont.; and the tributaries of Clarks Fork in the Cabinet National Forest, Mont.

The greatest destruction, both in life and timber, was on the two rivers first mentioned in the Coeur d'Alene Forest. It is estimated by the Forestry Department that there is approximately 900,000,000 ft. of accessible fire-killed timber on the St. Joe water-shed, 60% of which is excellent Western white pine. The remaining 40% is a mixture of spruce, larch, red fir, hemlock and cedar. This timber lies in five large logging units, four of which contain more than 100,000,000 ft. of timber each. Practically all of this timber can be logged profitably, although there will be some expense involved in constructing roads and improving streams for driving. The average drive for the St. Joe timber to the railroad will be less than twelve miles. Over 100,000,000 ft. of this timber is adjacent to the right of way of the Chicago, Milwaukee & Puget Sound R. R.

On the Coeur d'Alene River the government estimate of the accessible fire-killed timber is 350,000,000 ft., of which 30% is white pine, and the remainder spruce, larch, fir, hemlock and cedar. This timber likewise lies in logging units, each of which contains suffcient timber to justify logging operations on a large scale.

Above the town of Taft, on the St. Regis River, it is estimated that there is 100,000,000 ft. of timber, of which 20,000,000 ft. is Western pine and the remainder spruce, larch, red fir, hemlock and lodgepole pine. This timber lies on both sides of the Northern Pacific R. R., and the government is now advertising it at the rate of $2 per M. ft. Before the timber was swept by fire, the stumpage rate asked was $4.50 per M. ft. Big Creek, in the Lolo Forest, contains 120,000,000 ft., B. M., of fire-killed timber. Of this amount, 30,000,000 ft. is white pine. and the rest spruce, red fir, larch and lodgepole pine. This creek contains both saw and tie timber, and the stream is easily drivable for ties. In the northwestern part of Montana the forest fires were more scattered, but large areas of fine timber were burned over on the Blackfeet, Flathead and Lewis and Clark National Forests. On the Middle Fork of the Stillwater River, a tributary of the Flathead River, the Supervisor reports more than 20,000,000 ft. of timber killed by fire. This timber is 70% Western larch, and forms a good logging unit, in that the cost of logging and driving the logs to mills in and around Kalispell will not exceed $6 per M., stumpage included. A great part of the head of the North Fork of Flathead River was swept by a fire which destroyed at least 75,000,000 ft. if timber.

If desired, the Forest Service will furnish men, thoroughly acquainted with the country, to accompany any person or persons interested in making personal examinations of timber. In case a personal examination is not convenient, detailed information is being sent out upon request as to the fire-killed timber which the government desires to sell.

W. B. Greeley, Hammond Block, Missoula, Mont., is in charge of District No. 1 of the Forest Service, and will give detailed information regarding this timber.

## TRADE PUBLICATIONS.

**CONCRETE WORKING TOOLS.**—Harold L. Bond Co., 383-391 Atlantic Ave., Boston, Mass. Paper; 4 × 8 ins.; pp. 8; illustrated.

The Ross concrete spade and the Andrews concrete tamper are here described. Both are practical tools and have been used on many important pieces of work.

**WIRE ROPE.**—A. Leschen & Sons Rope Co., St. Louis, Mo. Paper; 3½ × 6 ins.; pp. 91; illustrated.

All those interested in wire rope would do well to send for this little booklet, for it contains a good deal of information about wire rope in a small and convenient shape. Besides a description of the different kinds of steel used in the makeup of wire cables, tables of diameters, prices, safe loads, weights per ft., diameter of m required there is also some data on w rope powe transmission. The catalog in les a pric list and sizes of the variou accessories such as blocks, sheaves, shack travelers etc. A very complete index npletes the whole.

PAVEMENTS.—Trinidad Lake phalt. Paper; 9 × 6 ins.; pp. 32; ill ated.

This is a little pamphlet tell something of the history and use of asph for pavements and shows many views streets in various cities paved with Trini Lake asphalt.

TIMBER PRESERVATION.— n Refining Co., Cincinnati, Ohio. P r; 8 × 9 ins.; pp. 4; illustrated.

This pamphlet deals with asph oils as a substitute for creosote oil. T company makes two grades of "timber alt" oil, one for application by the pres process and the other to be applied wit brush.

GAS ENGINES.—The Charter G Engine Co., Sterling, Ill. Paper; 6 ¼ ins.; pp. 4; illustrated.

The Charter gas engine is of single-cylinder horizontal type, and i built in stationary and portable units. T former are of 2 to 100 HP. and the latt of 7 to 20 HP. One of the specialties is gasoline hoist.

ELECTRICAL CONDUITS.—H. B. Camp Co., Rookery Bldg., Chicago. Paper; 3½ × 6 ins.; pp. 30; illustrated.

This pamphlet deals with the comparative resistance and efficiency of vitrified clay, concrete and fiber conduits. It includes reports from different engineers and results of tests, indicating the superiority of vitrified clay conduits.

FIRELESS LOCOMOTIVES.—Hannoversche Maschinenbau Aktien Gesellschaft Georg Egestorff, Hannover, Germany. Paper, 9 × 12½ ins.; pp. 8; illustrated.

Superheated water locomotives are not very common, but this German firm appears to have built a number of them. Those shown are of the 0-4-0 type, of weights up to 37 tons.

GRAPHITE PAINT.—Joseph Dixon Crucible Co., Jersey City, N. J. Paper; 6¼ × 3½ ins.; pp. 12; illustrated.

Dixon's silica-graphite paint for preserving steel cars is described here. This paint is a natural mixture of silica and graphite with boiled linseed oil as a vehicle and has been found to be especially adaptable for steel car painting both from its wearing under hard service, and the quickness with which it dries.

CONTRACTORS' GASOLINE HOIST AND ELEVATOR.—Bates & Edmonds Motor Co., Lansing, Mich. Paper; 9 × 6 ins.; pp. 6; illustrated.

The engine is of the vertical type, and is geared to a hoist having a cable sheave for the double-platform elevator, and a drum for direct hoisting. The cages, wire guides, head frame for sheaves, and operating cables are supplied, making a complete hoist and elevator equipment. The plant is intended specially for building construction work.

LOCOMOTIVES—Baldwin Locomotive Works, Philadelphia, Pa. Paper; 9 × 6 ins.; pp. 32; illustrated.

This pamphlet illustrates a number of locomotives built recently for passenger service. They range from a 58-ton engine of the 4-0-0 class to a 120-ton engine of the 4-6-2 class, the latter being designed for handling heavy trains at high speeds on a line having heavy grades. A list of dimensions and particulars of the special features are given in each case.

TRENCH EXCAVATOR.—American Trench Machine Co., St. Louis, Mo. Paper; 6 × 9 ins.; pp. 4; illustrated

The Helm excavator has a vertical frame carrying an endless chain of cutters and scrapers, and having a vertical movement to give the required depth of trench. This excavation frame is carried at one end of a self-propelling machine which includes the boiler, engine and belt conveyor for excavated material. The pamphlet is a reprint of an article describing the machine.

SURVEYING INSTRUMENTS.—Buff & Buff Mfg. Co., 50 Church St., New York City. Paper; 6 × 9 ins.; pp. 115; illustrated.

This catalog contains illustrations and descriptions of transits, levels, sextants and other surveying instruments and of the Buff graduating engines. In the descriptive matter, particular emphasis is put upon the correctness of the spacing of the graduations, which are guaranteed within 1″ of arc. It is claimed, too, that the spider webs used for stadia lines in these instruments are about one-half the diameter of those used by other makers. The diameter of the web ordinarily used is given as .0002 to .0003 of an inch.

(Coninued on page 234)

# LIST OF CONTRACTS PENDING.

## Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file (for reference only unless otherwise noted) at the office of The Engineering News Publishing Co., 220 Broadway, New York.

| Bids close. | | Noted in issue of |
|---|---|---|
| 11-11* | Paving, Altoona, Pa | (S) 11- 3 |
| 11-12 | Capstan, New York | (S.) 10-13 |
| 11-12 | Dredging, Wilmington, N. C. | (S.) 10-20 |
| 11-12 | Power plant, Annapolis, Md. | (S.) 10-20 |
| 11-19 | Quarters, Mare Island, Cal. | (S.) 10-13 |
| 11-19 | Seawall, Norfolk, Va | (S.) 10-20 |
| 11-23* | Dredging, Boston, Mass | (S) 10-27 |
| 11-23* | Breakwater, Duluth, Minn (P & S) | 11- 3 |
| 11-30* | Diversion channel, Portland, Ore. | (S.) 9-29 |
| 12- 1* | Headgates, Boise, Idaho, (S) | 10-20 |
| 12- 1 | Extending breakwater, Los Angeles, Cal (S) | 11- 3 |
| 12- 3 | Coal & Ash handling apparatus, Norfolk, Va. | (S)- 10-27 |
| 12- 3 | Boilers, etc., New Orleans, La. | (S) 10-27 |
| 12-10 | Pier, Bremerton, Wash | (S.) 11-10 |
| 12-15* | Diversion work, Klamath Falls, Ore. (S) | 10-20 |
| 1- 7 | Dredging, Hawaii (U. S. Poss.) | (S) 10-27 |

## Light, Heat and Power Plants.

| Bids open. | | Noted in issue of |
|---|---|---|
| 11-11 | Steam heating, New York | 11- 3 |
| 11-11 | Motor generator sets, Panama (U. S. Poss.) | 11-10 |
| 11-12 | Light plant, Occoquan, Va | 11-10 |
| 11-12 | Power plant, Annapolis, Md | 10-20 |
| 11-14 | Franchise, Bodie, Cal | 10-13 |
| 11-14 | Elec. material, Panama (U. S. Poss) | 10-27 |
| 11-14 | Heating & vent., New York | 11- 3 |
| 11-15* | Steam system, Rome, N. Y | 11- 3 |
| 11-15 | Electric elevator, National Soldiers' Home, Va | 11- 3 |
| 11-15 | Tungsten lamps, Toronto, Ont | 11-10 |
| 11-16 | Elec. cables, New York | 10-27 |
| 11-17* | Engines, generators, Washington, D. C | 11-10 |
| 11-17 | Cable, New York | 11-10 |
| 11-18 | Generating Unit, Warrensville, O. | 11-10 |
| 11-19 | Elec. driven pumps, Norfolk, Va. | 10-27 |
| 11-28* | Elec. light, etc., South River, N. J. | 10-27 |
| 11-28* | Water power, Marshalltown, Ia | 11- 3 |
| 11-28 | Elec. machinery, San Francisco, Cal. | 11- 3 |
| 12- 1* | Heating and vent. system, New York | 10-20 |
| 12- 1 | Elec. elevator equip., New York | 10-20 |
| 12- 3 | Boilers, etc., New Orleans, La | 10-27 |
| 12- 7 | Wire and cables, Winnipeg, Man. | 11- 3 |
| 12-12 | Franchise, Newport, Cal | 11- 3 |

## Bridges.

| Bids close. | | Noted in issue of |
|---|---|---|
| 11-11 | Bridge, Cincinnati, Ohio | 10-27 |
| 11-11 | Bridge, Indianapolis, Ind | 10-20 |
| 11-12 | Bridge, Yonganoxie, Kan | 11-10 |
| 11-12 | Bridge, Chico, Cal | 11-10 |
| 11-14 | Bridge, Brawley, Cal | 10-27 |
| 11-14 | Bridge work, El Centro, Cal | 10-27 |
| 12-15 | Bridge, Portland, Ore | 11-10 |
| 11-16 | Bridge, Cleveland, Ohio | 11- 3 |
| 11-16 | Bridge, Grundy Center, Ia | 11-10 |
| 11-17 | Bridge, New York, N. Y | 11- 3 |
| 11-19 | Bridge, Westernport, Md | 11-10 |
| 11-28 | Bridge, Wallachin, B. C | 11- 3 |
| 11-28 | Bridge, Victoria, B. C | 11-10 |
| 12- 1 | Bridge, Montmagny, Que | 10-27 |

## Buildings.

| Bids close. | | Noted in issue of |
|---|---|---|
| 11-10 | High school, Cresline, Ohio | 11-10 |
| 11-11 | Building, New York, N. Y | 11- 3 |
| 11-11 | Museum, New Orleans, La | 11-10 |
| 11-11 | Hydraulic fills, Modesto, Cal | 11-10 |
| 11-14 | Post-office, Pontiac, Mich | 9-22 |
| 11-14 | School, New York, N. Y | 11- 3 |
| 11-14 | Hospital, Fort D. A. Russell, Wyo. | 11-10 |
| 11-15 | Plant, Fort Oglethorpe, Ga (Mfg Pl) | 11- 3 |
| 11-18 | Engine house, Milwaukee, Wis | 11- 3 |
| 11-19 | Quarters, Mare Island, Cal | 10-13 |
| 11-19 | Post-office, Eagle Pass, Tex | 10-13 |
| 11-22* | Post-office, Lewiston, Idaho | 10- 6 |
| 11-22 | Post-office, Porto Rico | 10- 6 |
| 11-22 | Court house, Tifton, Ga | 11- 3 |
| 11-22 | High school, Jersey City, N. J | 11- 3 |
| 11-22 | Excavation, etc., Cleveland, O | 11-10 |
| 11-28 | Building, St. Paul, Minn | 11-10 |
| 11-30 | Building, Phila., Pa | 9-29 |
| 11-30 | Building decorating, Indianapolis, Ind. | 11- 3 |
| 12- 1 | Post-office, New York, N. Y | 10-20 |
| 12- 1 | School, Portland, Ore | 10-27 |
| 12- 1 | Jail, etc., Troy, N. Y | 11-10 |
| 12- 5 | Schools, Toledo, Ohio | 10-27 |
| 12- 5* | High schools, Toledo, Ohio | 11- 3 |
| 12- 5* | Post-office, Santa Cruz, Cal | 11- 3 |
| 12- 7 | Post office, etc., Ellsworth, Me | 11- 3 |
| 12- 8* | Post-office, Granite City, Ill | 11- 3 |
| 12- 8 | Post-office, Carbondale, Pa | 11- 3 |
| 12-14* | Post-office, Lead, S. Dak | 11-10 |
| 1-31 | Court-house, Onida, S. Dak | 10-20 |
| 4-15 | Plans, Havana, Cuba | 10-20 |

## Water-Works.

| Bids close. | | Noted in issue of |
|---|---|---|
| 11-11 | Reservoir work, Spokane, Wash. | 11- 3 |
| 11-11 | Water system impvt., David City, Neb. | 11-10 |
| 1112* | Pumping outfit, Sioux City, Ia | 11- 3 |
| 11-14* | Pumping equip., Freehold, N. J. | 11- 3 |
| 11-14 | Water pipe, Pittsburg, Pa | 11-10 |
| 11-14 | Water pipe, etc., Winnipeg, Man. | 11-10 |
| 11-14 | Water-works, Belle Fourche, S. Dak. | 11-10 |
| 11-15 | Water mains, Lamotte, Iowa | 11- 3 |
| 11-15 | W-Wks. impvts., Beatrice, Neb. | 11-10 |
| 11-16 | Reservoir, Fort Greble, R. I | 11- 3 |
| 11-16 | Water-works impvts., West Carrollton, Ohio. | 11-10 |
| 11-19* | Dam, etc., Brookville, Pa | 11- 3 |
| 11-21 | Water supply, Pittsburg Landing, Tenn. | 11- 3 |
| 11-27 | Water-meters, Rugby, N. Dak | 11-10 |
| 11-28* | Water-works, South River, N. J. | 10-27 |
| 11-30* | Diversion channel, Portland, Ore. | 9-29 |
| 11-30 | Distributing canals, Powell, Wyo | 11- 3 |
| 12- 1* | Head gates, Boise, Idaho | 10-20 |
| 12- 6 | Tank and tower, Pima, Ariz | 11-10 |
| 12-15* | Diversion work, Klamath Falls, Ore. | 10-20 |

## Sewers.

| Bids close. | | Noted in issue of |
|---|---|---|
| 11-12 | Sewers, Tonganorie, Kan | 11-10 |
| 11-14* | Sewers, Atlantic City, N. J | 10-20 |
| 11-15 | Sewer, Troy, N. Y | 11-10 |
| 11-15 | Sewer, Hutchinson, Minn | 11-10 |
| 11-16 | Sewer, Grundy Center, Ia | 11-10 |
| 11-16* | Sewer, Richmond, Va | 11-10 |
| 11-16 | Sewer, Grundy Center, Iowa | 11-10 |
| 11-17* | Sewer, Keyport, N. J | 10-27 |
| 11-18 | Sewer, Ft. Caswell, N. C | 10-27 |
| 11-22 | Sewers, New York | 11-10 |
| 11-22 | Sewer, New York | 11-10 |
| 11-23 | Sewers, Brooklyn, N. Y | 11-10 |
| 11-28* | Sewers, South River, N. J | 10-27 |

## Streets and Roads.

| Bids close. | | Noted in issue of |
|---|---|---|
| 11-10 | Grading, etc., Connellsville, Pa | 11-10 |
| 11-11 | Gravel road, Lafayette, Ind | 10-20 |
| 11-11* | Paving, Altoona, Pa | 11- 3 |
| 11-11 | Grading, etc., Greenville, Ohio | 11-10 |
| 11-12 | Road, Fort Wayne, Ind | 10- 6 |
| 11-14 | Grading, El Centro, Cal | 10-27 |
| 11-14 | Paving, Huntington, W. Va | 10-27 |
| 11-14 | Roads, Washington, Pa | 10-27 |
| 11-14 | Paving, Lebanon, Ind | 11- 3 |
| 11-14 | State roads, Hartford, Conn | 11- 3 |
| 11-14 | Sidewalks, etc., Galveston, Tex | 11-10 |
| 11-14 | Street imprvt. bonds, Alliance, Ohio. | 11-10 |
| 11-15 | Road, Logansport, Ind | 10-27 |
| 11-15 | Curbing, etc., Jefferson City, Mo | 11-10 |
| 11-17 | Curb, New York, N. Y | 11- 3 |
| 11-17 | Paving, etc., New York, N. Y | 11- 3 |
| 11-17 | Resurfacing, New York, N. Y | 11-10 |
| 11-18 | Road improvement, Cincinnati, Ohio | 10-27 |
| 11-18 | Road, Cincinnati, Ohio | 11- 3 |
| 11-18 | Roads, Jackson Barracks, La | 11- 3 |
| 11-21* | Paving, Amarillo, Tex | 11-10 |
| 11-22 | Gravel road, Anderson, Ind | 11- 3 |
| 11-22 | Curbs, etc., New York | 11-10 |
| 11-23 | Paving, etc., New York | 11-10 |
| 11-25 | Road, Cincinnati, Ohio | 11-10 |
| 12-13 | Paving, Crookston, Minn | 11- 3 |

## Miscellaneous.

| Bids close. | | Noted in issue of |
|---|---|---|
| 11-11 | Crank shaft, Panama (U. S. Poss) | 11-10 |
| 11-12 | Dredging, Wilmington, N. C | 10-20 |
| 11-12 | Capstan, New York | 10-13 |
| 11-12* | Wooden pier, Annapolis, Md | 10-13 |
| 11-12* | Riprap stone, Boston, Mass | 10-13 |
| 11-12 | Ditches, Crookston, Minn | 10-27 |
| 11-12 | See "Electric Railways," Calgary, Alta | 10-27 |
| 11-12 | Steam boiler, Biwabik, Minn | 11- 3 |
| 11-14 | Wall and gates, Chalmette, La | 10-27 |
| 11-14 | Drainage district, Rockwell City, Iowa. | 11- 3 |
| 11- 14 | Chemical and hose engine, Boston, Mass. | 11- 3 |
| 11-14 | Ditch, St. Peter, Minn | 11- 3 |
| 11-14 | Dredging, Los Angeles, Cal | 11- 3 |
| 11-14 | Towboats, Boston, Mass | 11-10 |
| 11-14 | Girders, Panama (U. S. Poss) | 11-10 |
| 11-14 | Fire escapes, New York | 11-10 |
| 11-14 | Machinery, Bakersfield, Cal | 11-10 |
| 11-14 | Dredging, Massfield, Ore | 11-10 |
| 11-15 | Excavation of channel, Ottawa, Ont | 10-27 |
| 11-15 | Dredging, Wilmington, Del | 10-27 |
| 11-15 | Hulls, flat-boats, etc., Cincinnati, Ohio | 10-20 |
| 11-15 | Ice houses, Ottawa, Ont | 11- 3 |
| 11-15* | Repairs to canal walls, Detroit, Mich. | 11- 3 |
| 11-15 | Hose, Washington, D. C | 11- 3 |
| 11-15 | Broken stone, New York | 11-10 |
| 11-15 | Repairs to ferryboat, New York | 11-10 |
| 11-15 | Wharf franchise, Los Angeles, Cal. | 11-10 |
| 11-15 | Drain, Dakota City, Iowa | 11-10 |
| 11-16 | Incinerating plants (Garbage) San Francisco, Cal | 8-25 |
| 11-16* | Steamboat, St. Louis, Mo | 10- 6 |
| 11-16 | Tar kettles, etc., New York | 11-10 |
| 11-16 | Drains, Storm Lake, Iowa | 11-10 |
| 11-16 | Elim. of grade crossing, Cleveland, Ohio. | 11- 3 |
| 11-16 | Miscellaneous supplies, New York. | 11-10 |
| 11-16 | Ditch, Redwood Falls, Minn | 11-10 |
| 11-17* | Dredging, Wilmington, Del | 10-20 |
| 11-17 | Riprap, Boston, Mass | 10-20 |
| 11-17 | Wire fence, Fort Sam Houston, Texas | 10-27 |
| 11-17 | Road roller, New York | 11-10 |
| 11-18 | Repairing ferry structures, New York | 11-10 |
| 11-18 | Dredging, Boston, Mass | 11-10 |
| 11-18 | Drainage district, Fort Dodge, Iowa. | 11-10 |
| 11-19 | Levee work, Allenfarm, Tex | 10-27 |
| 11-19 | Seawall, Norfolk, Va | 10-20 |
| 11-19* | Dredging, Newport, R. I | 10-20 |
| 11-19 | Tile, Shelbyville, Ind | 11-10 |
| 11-21 | See Electric Railways, San Rafael, Cal. | 11- 3 |
| 11-21 | Extending jetty, Cleveland, Ohio. | 11-10 |
| 11-21 | Removal of wreck, Jacksonville, Fla. | 11-10 |
| 11-21 | Lodge, wall, etc., Pittsburg Landing, Tenn | 11-10 |
| 11-22 | Mechanical stokers, Akron, Ohio. | 10-27 |
| 11-22* | Dredging, New York | 10-27 |
| 11-22 | Barge Canal, Albany, N. Y | 11- 3 |
| 11-22 | Timber dock, Michigan City, Ind. | 11-10 |
| 11-22 | Ice piers, Annapolis Royal, N. S. | 11-10 |
| 11-22 | Breakwater, North Ingnish, N. S. | 11-10 |
| 11-22 | Snow and ice removal, (garbage) New York. | 11-10 |
| 11-23* | Dredging, Boston, Mass | 10-27 |
| 11-23* | Removing dike, dredging Cincinnati, Ohio | 10-27 |
| 11-23* | Breakwater, Duluth, Minn | 10-27 |
| 11-23* | Dredging, Boston, Mass | 10-27 |
| 11- 24 | Drain, Lebanon, Ind | 11- 3 |
| 11-24* | Steel forgings, castings, etc., Charleston, S. C. | 11- 3 |
| 11-25 | Hose, Duluth, Minn | 11-10 |
| 12- 1 | Door operating system, New York. | 10-20 |
| —— | *Excavation and embankment Hinckley, N. Y | 10-20 |
| 12- 1 | Port works, Turkey (Foreign). | 10- 6 |
| 12- 1 | Battleship, Colliers, Washington, D. C | 10- 6 |
| 12- 1 | Extending breakwater, Los Angeles, Cal. | 11- 3 |
| 12- 1* | Lumber, Washington Barracks, D. C. | 11- 3 |
| 12- 1* | Dredging, Wilmington, Del | 11- 3 |
| 12- 1 | Railway, Carriages, China (Foreign). | 11-10 |
| 12- 1 | Armor, Washington, D. C. | 11-10 |
| 12- 2* | Wharf, Richmond, Va | 11-10 |
| 12- 3 | Dredging, Newport, R. I | 11- 3 |
| 12- 3 | Coal and ash handling apparatus, Norfolk, Va | 10-27 |
| 12- 5 | Dredging, Wilmington, Del | 11-10 |
| 12- 6 | Drains, Sac City, Iowa | 11-10 |
| 12- 9* | Removing rock ledge, Cincinnati, Ohio. | 11-10 |
| 12-10 | Pier, Bremerton, Wash | 11-10 |
| 12-10 | Quay wall, Key West, Fla | 11-10 |
| 12-12 | Dredging rock removal, New York. | 11-10 |
| 12-13 | (1911) Copper mine, Turkey (Foreign) | 10- 6 |
| 12-15 | Dry-dock, etc., Argentina (Foreign). | 11-10 |
| 12-22 | Steel caissons, New York | 11-10 |
| 1- 7 | Dredging, Hawaii (U. S. Poss). | 10-27 |

## Examinations.

| Applications filed. | | Noted in issue of |
|---|---|---|
| 11-16 | Assistant chemist, Trenton, N. J. | 10-20 |
| 11-16 | Sanitary engineer, Trenton, N.J. | 10-20 |
| 11-16 | Sanitary inspector, Trenton, N.J. | 10-20 |
| 11-21 | Examiners of Efficiency, Chicago, Ill. | 11-10 |
| 11-22 | Junior Engr., Pittsburg, Pa | 10-27 |
| 11-22 | Aid, Washington, D. C | 10-27 |
| 11-22 | Examiners of Efficiency, Chicago, Ill. | 11-10 |
| 11-23 | Copperplate Map Engraver, Wash., D. C | 10-27 |
| 11-26 | Telephone traffic inspector, Albany, N. Y | 10-20 |
| 11-26 | Special investigator, Albany, N.Y. | 10-20 |
| 11-26 | Mechanical engr., Albany, N.Y. | 10-20 |
| 11-26 | Junior statistician, Albany, N. Y. | 10-20 |
| 11-26 | Highway inspector, Albany, N.Y. | 10-20 |
| 11-26 | Chief investigator, Albany, N. Y. | 10-20 |
| 11-26 | Assistant gas inspector, Albany, N. Y. | 10-20 |
| 11-28 | Assistant chief, Albany, N. Y. | 10-20 |
| 12- 7 | Preparator of Fossils, Washington, D. C | 11- 3 |
| 12- 7 | Scientific Assistant in Soil Bacteriology, and Scientific assistant in Tobacco Chemistry, Wash., D. C | 11-10 |
| 12- 7 | Mineral Examiner, Wash, D. C. | 11-10 |
| 12- 7 | Cartographic Draftsman, Wash., D. C | 11-10 |
| 12- 7 | Fortification Draftsman, Wash., D. C. | 11-10 |
| 12-7, 8 and 9 | Inspector of Mech. & Elec. Engineering, Washington, D. C. | 11-10 |
| 12-28 | Industrial teacher, Washington, D. C. | 11-10 |
| 1- 4 | Chemist in Forest Products, Washington, D. C | 11- 3 |

***THE ONLY WORK ON THE SUBJECT***

# MUNICIPAL FRANCHISES

## By DELOS F. WILCOX, Ph. D.

**Chief of Bureau of Franchises of the Public Service Commission for the First Division of New York**

**Author of "The American City," "The Study of City Government," "The Government of Great American Cities," etc.**

**PURPOSE OF THIS BOOK.**—The confusion resulting from the changing attitude of public opinion toward public utilities, from the variety of franchises granting authorities, from the lack of information on the part of public officials, from the absence of any consistent or comprehensive public policy relative to franchises in any particular city, and from the multiplicity of constitutional and statutory restrictions imposed by forty-six different commonwealths, has left franchise matters throughout the United States in a deplorable condition. The purpose of this book is to simplify, as far as possible, fundamental conceptions as to the nature and purpose of franchise grants; to state as clearly as possible the necessary conditions to be imposed in connection with various classes of franchises; to describe the best types of franchises actually in force in different cities of the country; and, finally, to discuss in a general way the principles involved in the regulation of public service utilities by means of taxation, rate regulation, public service commissions, the Referendum and municipal ownership. In volume one will be included the preliminary discussion of fundamental principles and illustrative chapters on electric light, telephone, telegraph, signal, electric conduit, water, sewer, heating, refrigerating, pneumatic tube, pipe-line and gas franchises. For volume two will be reserved the chapters on the various classes of transportation franchises and the concluding discussion of taxation and control.

While not hesitating to express his own opinion on controversial matters, the author aims primarily to present an analysis of facts and conditions in such form as to be available for the use of officials having responsibility for granting franchises or enforcing franchise contracts, special students of public affairs, and citizens who, individually or through semi-public organizations, are endeavoring to bring intelligence to bear in a practical way upon the governmental problems of their home cities. While it is not the purpose of the author to cast aspersions upon the intelligence or sincerity of any class of public officials or of politicians in general, it is clear that this book can be useful only to those persons, either officials or private citizens, who are in good faith seeking for light upon this most complex problem and who approach the subject, not from the standpoint of personal or private interests, but from the standpoint of the public good.

## *CONTENTS OF VOLUME I: PIPE AND WIRE FRANCHISES*

### PART I—INTRODUCTORY

**Chapter I—How Franchises Get Away.**

**Chapter II—What a Franchise Signifies.**

**Chapter III—Monopoly Profits and Ways of Limiting Them.**

**Chapter IV—Injuries to Individuals and Ways of Preventing Them.**

**Chapter V—Temptations to Public Wrong and Ways of overcoming Them.**

### PART II—PIPE AND WIRE FRANCHISES

**Chapter VI—Electric Light, Heat and Power as a Public Utility.**

**Chapter VII—Franchise Conditions Imposed on Electric Light Companies.**

**Chapter VIII—The Telephone.**

**Chapter IX—Telephone Franchise Regulations.**

**Chapter X—The Telegraph and the Conditions Imposed Upon it by Local Authorities.**

**Chapter XI—Messenger and Signal Franchises.**

**Chapter XII—Electrical Conduits.**

**Chapter XIII—Water Works and Water Supply Franchises.**

**Chapter XIV—Sewer Franchises.**

**Chapter XV—Central Heating Franchises.**

**Chapter XVI—Refrigeration Franchises.**

**Chapter XVII—Pneumatic Tube Franchises.**

**Chapter XVIII—Oil Pipe Line Franchises.**

**Chapter XIX—Artificial and Natural Gas as Public Utilities.**

**Chapter XX—Gas Franchises where Only Artificial Gas is Available.**

**Chapter XXI—Gas Franchises in Cities Within Reach of Natural Gas Fields.**

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**ANNOUNCEMENT.**

**The second volume of this work will include parts 3 and 4.**

**Part 3 will contain an analysis and discussion of local transportation franchises including street railways, interurban lines, terminal railroads, subways, elevated lines, freight tunnels, ferries, coach and cab lines, bridges and turnpikes and toll roads.**

**Part 4 will comprise the chapters discussing taxation and control of Municipal Franchises, including the following subjects:**

**Constitutional and statutory limitations on local franchise grants,**
**Popular control of franchises through the initiative and referendum,**
**The function of public service commissions,**
**Municipal franchise bureaus and public utility experts,**
**Relation of franchises to land values,**
**Principles of franchise taxation,**
**Municipal operation or public regulation,**

**It is expected that Volume II will be ready within one year after publication of Volume I.**

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## TRADE PUBLICATIONS.

(Continued from page 232.)

LOCOMOTIVE HEADLIGHTS.—The R. G. Peters Mfg. Co., 133 Grandville Ave., Grand Rapids, Mich. Paper; 6 × 9 ins.; pp. 24; illustrated.

A turbo-generator is used, placed at any convenient position on the locomotive. The head lamps are of three types, having respectively two vertical carbons, two horizontal carbons, or one carbon and one copper electrode. The pamphlet includes a report of a test made at the University of Illinois.

GRAPHITE PAINT.—Detroit Graphite Co., Detroit, Mich. Paper; 4 × 9 ins.; pp. 40; illustrated.

The first few pages of this little booklet describe the manufacture of graphite paint, including some account of the graphite ore used. A few pages relate to the use of graphite paint for the steel work of buildings and bridges. The larger part is made up of views of notable buildings and structures where this paint has been used. There are also a few pages of instructions for use and specifications to insure proper painting and repainting of steel structures.

DIGGING MACHINERY.—The Hayward Co., 50 Church St., New York City. Stiff paper; 9 × 12 ins.; pp. 78; illustrated.

This catalog is chiefly a collection of halftone reproductions of photographs showing the uses to which Haywood buckets and digging machinery have been put. It is printed on heavy paper and is an excellent work of typography and book making. Orange-peel buckets, clam-shell buckets, excavators, dredges, coal-handling machinery, traveling derricks, derrick fixtures, etc., are fully illustrated by photographs taken on many kinds of work. There are many interesting views of the work on the Florida East Coast Ry., through the Everglades and other interesting engineering enterprises.

FRENCH EXCAVATOR.—The G. W. Parsons Co., Newton, Iowa. Paper; 6 × 9 ins.; pp. 24; illustrated.

The Parsons excavator has endless chains running on a boom or ladder frame and fitted with cutting blades and scrapers. The material is delivered upon lateral belt conveyors. The ladder frame, the conveyors and the chain-driving mechanism are mounted on a trailing truck hitched to the main four-wheeled frame which carries the engine and boiler. A special feature of the machine is that various widths of trench can be excavated without changing the cutters. This is effected by giving the ladder frame a lateral travel upon the machine. The machines will cut to any width from 28 to 70 ins., and as deep as 20 ft.

DREDGING BUCKETS AND DIPPERS.—Theodore Smith & Sons Co., Foot of Essex St., Jersey City, N. J. Paper; 9 × 6 ins.; pp. 55; illustrated.

The illustrations show clam shell, orange peel and dipper buckets for dredging. A special type of clam shell bucket is shown for hard digging, in which the mouth, or cutting edge, is rounded instead of flat to increase the penetrating power of the bucket. Some of the illustrations show a bucket of this type in use pulling stumps from the bed of a stream. Two types of stone grapple are illustrated and briefly described. There is a table of the weights and principal dimensions, closed and opened, for orange peel and clam shell buckets of various capacities.

BALL AND TUBE MILLS.—Abbe Engineering Co., 220 Broadway, New York, Catalog No. 5; paper; 6 × 9 ins.; pp. 48; illustrated.

The Abbe ball mill, with spiral screen and spiral discharge, is described in the first pages of this catalog. The spiral screen is intercoiled with the regular discharge spiral. The screening chamber can be attached to any Abbe ball mill and made of ample capacity to handle any output that the mill will produce. The material is submitted to the grinding action of the balls while traveling the full length of the machine before reaching the screen. A spiral feed and discharge for tube mills is also described. The last few pages are devoted to double conical ball and pebble mills and to small mills for laboratory use.

DRILLING MACHINERY.—Cyclone Drill Co., Orrville, Ohio. Stiff paper; 6¾ × 9¾ ins.; pp. 128; illustrated.

Well-drilling machinery is the subject of this booklet. The first dozen pages contain some helpful suggestions and hints on how to start and carry on successfully a well-driving business. The rest of the booklet describes in detail the necessary apparatus. Six pages are devoted to gasoline engines as motive power for operating drills. Eight pages describe cable drills, covering all requirements of cable machines up to and including 1,200 ft. capacity outfits. Traction drills, steam and gasoline, cable and hollow rod drills, double walking beam drills, core drills, pipe pulling and driving tools, blowers, cable tools, in fact everything that goes to make up a drilling outfit are here described and illustrated, with prices also given.

PUBLIC HEALTH EXHIBITS.—Educational Exhibition Co., Providence, R. I. Stiff paper; 6 × 8½ ins.; pp. 40; illustrated.

The anti-tuberculosis crusade which has made and is now making such good progress in all parts of the country has given rise to a new industry. This industry is the furnishing of the wherewithal for exhibition purposes in the way of photographs, model cots, window tents, signs and other display features calculated to attract the attention and interest the passing people. This method of reaching people is often effective, and undoubtedly many lessons in sanitation have been thus taught. This company not only furnishes these materials, but makes a business of planning and superintending exhibits for local organizations. The booklet is very well printed and illustrated, and contains much information about arranging and handling such exhibits.

WATER-JET EDUCTORS.—Schutte & Koerting Co., Philadelphia, Pa. Paper; 8 × 11 ins.; pp. 12; illustrated.

The water-jet eductor or ejector is perhaps the simplest, cheapest and most convenient pumping apparatus which has ever been invented. For its operation it, of course, requires plenty of water under pressure, which can afford to be wasted along with the ejected liquid. This pamphlet describes the various uses, capacities and other useful information about ejectors of all kinds, including a water economizer for fountains, by the use of which a large proportion of the water for display is used continuously, by being sucked from the basin on the ejector principle. Water-jet sand-washing plants and water-jet ash conveyors are also described. The latter, of course, has its principal use on ships for removing the boiler ashes quickly and economically.

DRILLING MACHINERY.—Star Drilling Machine Co., Akron, Ohio. Paper; 6 × 9¼ ins.; pp. 24; illustrated.

This little pamphlet describes drilling machinery for blast hole drilling in all kinds of work, railroad and canal construction, excavating in rock and mining. The first 8 pages describe in some detail notable work that has been done with this make of drills, on the Pennsylvania R. R. low grade freight line, on the Panama Canal construction and numerous other important undertakings. There are several pages of directions for setting up and moving, for the size, depth, distribution, charging and tamping of blast holes, and which of the several outfits are adapted for the particular purposes. Then follows several pages of the make up of each outfit with descriptions of each individual part.

RECORDING THERMOMETERS.—The Bristol Co., Waterbury, Conn. Bulletin No. 126. Paper; 8 × 10½ ins.; pp. 31; illustrated.

The bulletin describes Class II of the Bristol recording thermometers, adapted for use at dry kilns, feed water heaters, rubber heaters, vulcanizers, vacuum pans, sugar refineries, mash tubs, breweries, malt kilns, japan ovens, pulp digesters, paper mills, vacuum dryers, patent leather processes, oil refineries, powder mills, etc. They depend for their operation upon the pressure of a vapor of a liquid in the sensitive bulb which is exposed to the changes in temperature to be recorded. This liquid is usually alcohol. The variations of pressure are transmitted through a flexible copper capillary connecting tube to the recording instrument, where the temperatures are recorded on a revolving disk.

COMBUSTION RECORDERS, PRESSURE INDICATORS, ETC.—Precision Instrument Co., 49 Larned St., West, Detroit, Mich. Paper; two pamphlets; 9¾ × 12¼ ins.; pp. 16; illustrated.

These pamphlets relate to instruments made by Alexander Wright & Co., of London (England), and prices are given in English money. The combustion recorder is the Simmance-Abady instrument, which automatically records the percentage of carbon dioxide in the flue gases. The construction and operation are described, sample diagrams are shown, and there is an extract from an article in "Engineering." The pressure and vacuum indicators and recorders are adapted for steam, gas, water, air, etc.; they include both disk and continuous charts. They are used for boiler flues, gas mains, coke ovens, mine ventilating, shafts and other purposes.

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**For other Proposal Advertisements see pages 51, 52, 53, 54, 56 of Advertisements and Construction News page 234.**

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## DAM AND RESERVOIR.

City of Pittsfield, Mass.

Sealed bids or proposals for building a Dam and Reservoir, addressed to the Clerk of the Board of Public Works and endorsed "Proposals for Dam and Reservoir," will be received at the office of the Board of Public Works, City Hall, Pittsfield, Massachusetts, until two o'clock P. M., Monday, the twelfth day of December, 1910. The location of the Dam and Reservoir to be built is in the town of Washington, Massachusetts, about seven miles in a southeasterly direction from Pittsfield. The main portion of the Dam will consist of cyclopean stone concrete masonry, faced with concrete blocks or ashlar on the upper side, and there will be concrete core-walls at the ends. The site of the Reservoir above the Dam is to be cleared and grubbed and soil is to be removed. A road about 8,500 feet in length is to be constructed and about 16,000 feet of diversion conduits are to be constructed for the purpose of diverting water into the proposed Reservoir. Some of the diversion conduits will be open channels, some vitrified pipes and some concrete. The principal items required in the construction of the work will be about 47,000 cubic yards of masonry, about 85,000 cubic yards of earth excavation, about 9,600 cubic yards of rock excavation, about 45 acres clearing and grubbing, about 4,000 linear feet of 12, 20, and 24-inch vitrified pipe, and about 1,300 cubic yards of paving.

Each bid must be accompanied by a certified check drawn upon a national bank or trust company established in Pittsfield, Boston or New York, for twelve thousand five hundred dollars ($12,500). A bond in the sum of one hundred and twenty-five thousand dollars ($125,000) will be required for the faithful performance of the contract. A material portion of the work must be completed on or before December 1, 1911, and the balance must be completed on or before July 1, 1912.

Pamphlets containing further information for bidders, form of proposal, contract and specifications and plans will be ready about November 14, 1910, and will be mailed to contractors who apply to the Engineer of the Board of Public Works, or may be obtained at his office. The printed form must be used in making bids. The right is reserved to reject any or all bids or to accept any bid. WILLIAM H. MACINNES, Mayor; FRANK HOWARD, Chairman, C. E. GLEASON, J. M. LINNEHAN, Board of Public Works; WILLIAM H. SWIFT, Chairman, JAMES W. HULL, ARTHUR H. RICE, EDWARD A. JONES, DANIEL ENGLAND, Committee on Water Supply; HIRAM A. MILLER, Chief Engineer; A. B. FARNHAM, Engineer, Board of Public Works.

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## TRENCHING MACHINE WORK.

Chambersburg, Pa.

We have Five (5) Miles water line trench. 4 to 5 ft. deep, in open country through farms which we would like to sublet to trenching machine contractor.

THE H. C. BROOKS COMPANY,

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## SEWER.

OFFICE OF THE COMMISSIONERS OF SEWERAGE OF LOUISVILLE, KY.
Incorporated.

Sealed proposals for the construction of a sewer known as "8th and St. Catherine Street Sewers," Contract No. 75, of the Comprehensive System of Sewerage for the City of Louisville, Ky., will be received at the office of the Commissioners of Sewerage, 605 Equitable Building, Louisville, Ky., until 12 o'clock noon, Dec. 2, 1910.

The work will consist of the construction of about 3,250 ft. of 36", 42" and 48" concrete sewer, including about 1,150 cu. yds. of concrete. Excavation 12 ft. to 18 ft. deep.

Plans and specifications may be seen at the office of the Commissioners and at the office of Harrison P. Eddy, Consulting Engineer, 14 Beacon St., Boston, Mass.

Sealed bids should be endorsed "Proposal for 8th and St. Catherine Street Sewers," and addressed to the Commissioners of Sewerage, Equitable Building, Louisville, Ky. Each bid must be accompanied by a certified check for at least seven per cent. (7%) of the total amount of the bid, or a "Bidder's Bond" as described in the form of proposal.

P. L. ATHERTON,
Chairman.

CHAS. P. WEAVER, Secy. and Treas.
J. B. F. BREED, Chief Engineer.

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## SEWERS.

Re-Advertisement of bids called for November 3rd, 1910.

Ansonia, Conn.

Sealed proposals for the construction of Section "D" of the Ansonia Sewer System will be received at the office of the Board of Sewer Commissioners in the City Hall until Thursday, November [illegible], 1910, at 8 o'clock P. M., at which time the bids will be publicly opened and read.

The proposals shall be made out in two ways:

1st. For commencing the work immediately.

2nd. For commencing the work as soon as the Season of 1911 will permit.

Quantities by which the bids will be tested are as follows:

893 ft. of 27" vitrified pipe.
1,420 ft. of 24" vitrified pipe.
1,331 ft. of 18" vitrified pipe.
2,900 ft. of 15" vitrified pipe.
35 Manholes.

A certified check for 5 per cent. of the amount of the bid to accompany each proposal.

Plans, specifications, blank form of proposals and other information relating thereto can be obtained at the office of the City Engineer.

The Commission reserves the right to reject any or all bids.

By order of the Board of Sewer Commissioners.

Ansonia, Conn., November 5th, 1910.

V. B. CLARKE,
Engineer.

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PROPOSALS FOR DREDGING.—War Department, Office of the Constructing Quartermaster, New London, Conn., Nov. 8, 1910.—Sealed proposals for dredging harbor at Fort H. G. Wright, New York, will be received here until 11 a. m., Nov. 30, 1910, and then opened. Information furnished on application. Envelopes containing proposals should be endorsed "Proposals for dredging," and addressed Capt. F. T. Arnold, Constructing Quartermaster, New London, Conn.

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DEPARTMENT OF THE INTERIOR.—North Yakima, Washington, November 5, 1910.—Sealed proposals will be received at the office of the Project Engineer, United States Reclamation Service, North Yakima, Washington, until 2 p. m., December 3, 1910, for the excavation of about seventy-three (73) miles of sublaterals, Tieton Unit of Yakima Project. For particulars, address the United States Reclamation Service, Fourth Ave. and B Street, North Yakima, Washington. CHAS. H. SWIGART, Supervising Engineer.

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## Situations Wanted

MECHANICAL ENGINEER, seven years' chemical plant experience, designer of mill buildings, equipment for handling and storage of materials, and general engineering work, desires change; executive and inventive ability. Address "K. A. 19," Engineering News, New York. 19-1t

GRADUATE ENGINEER (32), general executive experience, estimating, design, construction, maintenance, industrial plants, reinforced concrete, structural steel, installation machinery. Address "G. A. 19," Engineering News, New York. 19-12t

DRAFTSMAN, several years' experience, structural steel, conveying machinery, etc., open for a position; New York location. Address "L. C. 17," Engineering News, New York. 19-2t

WANTED—By lady, position as draftsman in engineer's office; salary moderate. Address "H. A. 19," Engineering News, New York. 19-1t

## Situations Open

WANTED—By large New York firm, structural steel engineer, up-to-date designer, New York building practice, capable of assisting in selling. Only good men need appply. Address "L. A. 19," Engineering News, New York. 19-tf

WANTED—A man to make templets and lay out work. MEMPHIS BRIDGE CO., Memphis, Tenn. 19-1t